

FARM SALES OF OHIO MILK THROUGH DIFFERENT OUTLETS

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and
R. W. Sherman

Part I. Columbus Area: Delaware, Fairfield, Franklin, Licking
Madison, Pickaway and Union Counties.

Part II. Akron-Canton Area: Carroll, Columbiana, Holmes, Medina,
Portage, Stark, Summit, Tuscarawas and Wayne Counties.

Part III. Toledo and Northwestern Ohio Area: Defiance, Fulton,
Hancock, Henry, Lucas, Ottawa, Paulding, Putnam,
Sandusky, Seneca, Williams and Wood Counties.

Part IV. Dayton-Cincinnati Area: Butler, Champaign, Clark, Clermont,
Clinton, Darke, Greene, Hamilton, Miami, Montgomery,
Preble and Warren Counties.

Part V. South Central Ohio Area: Adams, Athens, Brown, Fayette, Gallia,
Highland, Hocking, Jackson, Lawrence, Meigs, Pike, Ross,
Scioto and Vinton Counties.

Part VI. West Central Ohio Area: Allen, Ashland, Auglaize, Crawford,
Hardin, Huron, Knox, Logan, Marion, Mercer, Morrow, Richland,
Shelby, Van Wert and Wyandot Counties.

Part VII. South Eastern Ohio Area: Belmont, Coshocton, Guernsey,
Harrison, Jefferson, Monroe, Morgan, Muskingum, Noble,
Perry and Washington Counties.

Part VIII. Northeastern Ohio Area: Ashtabula, Cuyahoga, Erie, Geauga,
Huron, Lake, Lorain, Mahoning, Medina, Portage, Summit
and Trumbull Counties.

Department of Rural Economics
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Ohio State University
and
Ohio Agricultural Experiment Station

Columbus, Ohio

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FARM SALES OF MILK THROUGH DIFFERENT OUTLETS

I. Columbus Area: Delaware, Fairfield, Franklin, Licking
Madison, Pickaway and Union Counties

by
C. G. McBride and R. W. Sherman

Sources of Data

This study is based upon a survey of all farms with three or more dairy cattle at the time of the last test for tuberculosis conducted by the U. S. Bureau of Animal Industry and the Ohio Department of Agriculture. The records were obtained through the cooperation of these authorities and those in charge of the records in the counties.

A list of herd owners was arranged by townships. Several copies of each list were made and these were mailed to a carefully selected group of key men, well distributed in each township. Each recipient of a list was asked to check the disposition of milk from each farm on which he had this information.

When the checked sheets were returned those for each township were combined and in most cases it was found that a practically complete record had been obtained. In a few townships, the returns were not full enough to constitute a satisfactory record. Personal visits were made into these townships in order to complete the data. A very high percentage of those who received lists cooperated by returning them promptly. Without this generous response on the part of those who were asked to assist, this survey would not have been possible. The cost in time and money of personal visitation to every township would have been prohibitive.

Limitations of the Study

Some difficulties were encountered in obtaining the information from the testing records. Some herds designated as mixed breeds undoubtedly were in whole or part beef cattle, but there was no way to determine the exact numbers. In areas surrounding the cities, there were many farms with 3 or 4 cattle tested. Replies indicated that many of these were kept primarily for home use but in some cases a small amount of milk or butterfat might be sold at certain times. Those who reported often lacked accurate information on such farms.

Some farmers had moved out of the townships between the times of the test and the survey, but this factor was in large measure adjusted by the addition of new names by those reporting. In a very few cases where all attempts to obtain a complete record left too large a percentage of farms unclassified some adjustments were made, based on the records of adjacent townships with approximately the same conditions. Despite the limitations described above, it is believed that the study presents a dependable picture of the disposal of milk from the farms of the area.

Comparison of Study Data with Census and Crop and Livestock Reports

The United States Census and the Federal-State Cooperative Crop and Livestock Reporting Service have a listing "cows and heifers 2 years old and over." This can be considered as a rough classification to include milk cows.

The test records from which this study was made listed all cattle tested. A producer organization in the area had records showing the number of milk cows in the herds of its members. These records were compiled in 1939 and the test records covered 1937 and 1938. It was assumed that not enough time has elapsed between the two to destroy the value of a comparison.

In the two sets of records there were found 947 identical farms. The number of cattle tested was compared with the number of milk cows on these association farms and it was found that for the area there were 65.6 milk cows for each 100 dairy cattle tested. This ratio has been used as a conversion factor to convert "all cattle" of the test records to an estimated number of "milk cows." These computed figures are compared with the Census and Livestock Reports in Table 1.

In general the number of milk cows computed from the study data is smaller than the Census or the Crop and Livestock Service estimate. This is accounted for largely by two factors: first, this study does not include the one and two cow farms; second, it is probable that fewer cows of beef breeds are included in the study than in the crop and livestock estimates. The one exception is Fairfield County where there is very little urban area and where small farms with one or two cows are not numerous. In Madison and Pickaway Counties, beef herds are numerous and the wide difference is evidence that more of the beef cattle were eliminated in the study than from the estimates. The rather wide variation in Franklin County can be accounted for in the large number of 1 and 2 cow farms.

Table 1 - Number of Cows and Heifers, 2 Years Old and Over, 1935 Census, Crop and Livestock Reporting Service, January 1, 1938 Estimates, and Computed Number of Milk Cows in the Study, by Counties

| County | <u>All Cows and Heifers 2 Years old and over</u> | | |
|-------------------|--|--|------------------------------------|
| | 1935 Census | Crop & Livestock Estimates January 1, 1938 | Milk cows in study 1937-1938 |
| Delaware | 17,109 | 16,600 | 15,838 |
| Fairfield | 15,026 | 13,300 | 13,756 |
| Franklin | 18,232 | 17,400 | 14,737 |
| Licking | 24,198 | 22,100 | 21,230 |
| Madison | 11,198 | 8,300 | 6,906 |
| Pickaway | 12,334 | 9,200 | 7,353 |
| Union | 14,022 | 13,900 | 13,628 |
| Total, 7 counties | 112,119 | 100,800 | 93,448 |

In Table 2 a comparison of cows per farm as recorded in the 1935 Census is made with the computed figures of the study. In the Census figures the total number of cows milked anytime during 1934 were divided by the number of farms reporting cows milked for each county. The average per farm of milk cows for the study was computed by applying the conversion factor mentioned above to all cattle tested. It is obvious that the average of the study would be higher because the farms with 1 or 2 milk cows are included in the Census.

Table 2 - Number of Cows Milked per Farm According to 1935 Census, and Number of Cattle and Number of Cows per Farm of Farms in the Study,* by County

| County | 1935 Census | All cattle in study | Cows in study |
|------------|----------------|------------------------|------------------|
| Delaware | 6.2 | 12.2 | 8.0 |
| Fairfield | 4.6 | 10.7 | 7.1 |
| Franklin | 5.8 | 12.7 | 8.3 |
| Licking | 5.6 | 12.2 | 8.0 |
| Madison | 5.0 | 12.4 | 8.1 |
| Pickaway | 4.5 | 10.4 | 6.8 |
| Union | 6.0 | 12.0 | 7.9 |
| 7 counties | 5.5 | 11.9 | 7.8 |
| State | 4.8 | -- | -- |

Changes in Market Outlets, 1903 to 1940

One of the first records of a systematic survey of outlets for milk and butterfat from Ohio farms is found in the annual report of the Ohio Dairymen's Association for 1903.¹ Professor J. W. Decker of Ohio State University compiled this directory of butter and cheese factories and milk skimming and shipping stations. The totals for the state were: butter factories, 148; skimming stations, 77; milk shipping stations, 22; American cheese factories, 114; Swiss cheese factories, 92. The report did not include milk dealers who purchased from farmers nor producer-distributors who sold milk at retail.

The seven counties of this area had 20 butterfat factories, 13 skimming stations and 1 milk shipping station. There were no cheese factories. The plants were classified as to type of ownership into cooperative, stock company and private. The butter factories were generally called creameries. Table 3 classifies these creameries as to type and location.

Table 3 - Creameries in Area in 1903*

| Name of plant | Type | County | Township |
|-----------------------------------|---------------|-----------|-----------|
| Sunbury Cooperative Creamery Co. | Cooperative | Delaware | Berkshire |
| Galena Creamery Co. | " | " | " |
| The Delaware Creamery | " | " | " |
| Pickerington Creamery | " | Fairfield | Violet |
| Lithopolis Elgin Butter Co. | Stock company | " | Bloom |
| Twin City Elgin Butter Co. | " " | " | Liberty |
| Worthington Creamery Co. | Private | Franklin | Sharon |
| Reynoldsburg Elgin Butter Factory | Cooperative | " | Truro |
| Gahanna Creamery Co. | " | " | Mifflin |
| Westerville Creamery Co. | Private | " | Blendon |

(continued)

¹ Reprint Annual Report Ohio Dairymen's Association, 1903, J. W. Decker.

Table 3 - Creameries in Area in 1903* (continued)

| Name of plant | Type | County | Township |
|-------------------------|-------------|----------|-------------|
| Alexandria Creamery | Private | Licking | St. Albans |
| Summit Creamery Co. | Cooperative | " | Lima |
| Licking County Creamery | Private | " | Newark |
| Outville Creamery Co. | Cooperative | " | Harrison |
| Gratiot Creamery | " | " | Hopewell |
| Vanatta Creamery | Private | " | Newton |
| Crowner Dairy Co. | " | Madison | Jefferson |
| Circleville Creamery | " | Pickaway | Circleville |
| Raymond Creamery | " | Union | Liberty |
| Marysville Creamery | " | " | Paris |

* In addition to the plants listed here there were the following skimming stations: Delaware County, 4 for Sunbury Creamery, 1 for Galena Creamery; Fairfield County, 1 for Licking County Creamery; Franklin County, 2 used in making butterine by the Capital City Dairy, 1 for Reynoldsburg Elgin Factory, 1 at New Albany; Licking County, 2 for Summit Station Creamery, 1 for Licking County Creamery, and 1 for Reynoldsburg Creamery.

In 1931 McBride and Cowden made a survey of sources of market milk and butterfat in Ohio.² The data in this study were obtained from the records of manufacturing and distribution concerns, local boards of health and from the U. S. Census.

Table 4 - Number of Dairy Cows Compared with Total Population in Counties of the Area, 1900 and 1930

| County | 1900 | | | 1930 | | |
|------------|------------|------------------|-------------------------|------------|------------------|-------------------------|
| | Dairy cows | Total population | Cows per 100 population | Dairy cows | Total population | Cows per 100 population |
| Delaware | 9,279 | 26,401 | 35 | 15,219 | 26,016 | 58 |
| Fairfield | 9,103 | 34,259 | 27 | 12,281 | 44,010 | 28 |
| Franklin | 13,660 | 164,460 | 8 | 16,095 | 361,055 | 4 |
| Licking | 12,116 | 47,070 | 26 | 19,820 | 59,962 | 33 |
| Madison | 5,369 | 20,590 | 26 | 7,285 | 20,253 | 37 |
| Pickaway | 6,681 | 27,016 | 25 | 8,232 | 27,238 | 30 |
| Union | 7,887 | 22,342 | 35 | 12,444 | 19,192 | 65 |
| 7 counties | 64,095 | 342,138 | 19 | 91,376 | 557,726 | 16 |

Some significant changes both in the number of cows and in population of the counties of the area, took place between 1900 and 1930 as shown in Table 4, compiled from the United States Census. These were important factors in the shift of market outlets between 1903 and 1931.

² Ohio Agricultural Experiment Station Bulletin No. 523, Sources of Market Milk and Butterfat in Ohio, C. G. McBride and T. K. Cowden, 1933.

There was little change in total population of four of the counties - Delaware, Madison, Pickaway and Union. In the other three, Fairfield, Franklin and Licking, there was a marked increase due to growth of the cities Lancaster, Columbus and Newark. These three cities had a total of 152,708 population in 1900 and 339,876 in 1930. The total milk purchasing population of the 7 counties in 1930 was estimated to be 471,089.

This pronounced increase of milk consuming population had a marked effect in changing market outlets. By 1931 the small butter factories and their skimming stations had disappeared. There were five churning points left in the area engaged in centralized butter manufacture, Columbus, Circleville, London, Newark and Pickerington. Milk manufacturing plants were operating in Columbus, Westerville, Marysville, and Sunbury.

A picture of sales of whole milk and butterfat by counties for 1929 as disclosed by the 1930 Census is found in Table 5.

Table 5 - Sales of Whole Milk and Butterfat and Number of Farms Reporting Each, for 1929

| County | Farms reporting whole milk sold (number) | Annual sales | | Annual sales of butterfat per farm (pounds) |
|------------|---|---|---|--|
| | | of whole milk per farm reporting (gallons) | Farms reporting cream sold as butterfat (number) | |
| Delaware | 1,579 | 3,511 | 419 | 637 |
| Fairfield | 415 | 3,113 | 1,830 | 562 |
| Franklin | 1,113 | 4,922 | 524 | 828 |
| Licking | 1,281 | 3,943 | 1,324 | 611 |
| Madison | 475 | 2,743 | 603 | 488 |
| Pickaway | 437 | 2,346 | 945 | 407 |
| Union | 1,380 | 2,777 | 607 | 563 |
| 7 counties | 6,680 | | 6,252 | |

Source: Ohio Agricultural Experiment Station Bulletin No. 523, p.30.

In 1929 Delaware, Union, Licking and Franklin Counties supplied the bulk of the sales of whole milk. Fairfield was heaviest in sales of butterfat and Licking was second. The eastern and southern parts of Licking County ran heaviest in sale of butterfat.

Status of Manufacturing Outlets at Time of Survey

To complete the record of changes in manufacturing outlets covered in the previous surveys it is significant to list at this point the plants operating in the area at the time of the 1940 survey. They are given in Table 6. The most pronounced change from 1931 to 1940 is in the increase in importance of plants manufacturing whole milk. The operations of Nestle's Milk Products Company at Marysville were expanded; the area covered and volume handled by the M & R Dietetic Laboratory had increased; and the Carnation Company at Coshocton, in addition to the milk going into the Rushville receiving station, was drawing much milk direct from Licking County.

Table 6 - Milk Products and Butter Manufacturing Plants in Area, 1940

| Name of Concern | Town | County | Product |
|---|--------------|-----------|-----------------------------------|
| Nestles Milk Prod. Co. (Receiving station) | Sunbury | Delaware | Evaporated milk |
| Westerville Creamery Co. | Westerville | " | Milk products |
| Pickerington Creamery (cheese division) | Bremen | Fairfield | American cheese |
| Pickerington Creamery | Pickerington | " | Butter and powdered buttermilk |
| Carnation Company (Receiving station) | Rushville | " | Evaporated milk |
| M & R Dietetic Laboratories, Inc. | Columbus | Franklin | Similac and powdered milk |
| Fairmont Creamery Co. | " | " | Butter and milk products |
| Beatrice Creamery | " | " | Butter |
| Moores & Ross, Inc. | " | " | Butter and condensed milk |
| The Davis Co. | Newark | Licking | Butter and condensed milk |
| London Creamery Co. | London | Madison | Butter |
| Pickaway Dairy Cooperative Ass'n. | Circleville | Pickaway | Butter and dry milk |
| Nestles Milk Products Co. | Marysville | Union | Evaporated milk |

Transportation Facilities

This area has now reached a stage of improved highway mileage that provides all year round access to markets from a great majority of the farms. The only exception is Licking County, which has slightly over 800 miles of earth roads out of a total of 1427 miles.

It is obvious from this that a much greater supply of milk is located on good roads within easy trucking distance of the consuming centers of the area than is needed for use as fresh milk and cream. It has been estimated that in the period of lowest production less than 30 per cent of the milk produced within the area and accessible for daily movement by truck is needed for fresh milk and cream consumption.

Status of Sanitary Controls by Health Boards

Regular farm inspection by the cities of Columbus, Newark and Delaware has been in effect for several years. Other than this, there had been little in the way of sanitary controls until the adoption of the U.S. Standard Milk Ordinance in four of the seven counties, beginning with Delaware County in 1936.

The U. S. Public Health Service Milk Ordinance is suggested for adoption by states, municipalities, counties or health districts, subject to the approval of the local legal authorities. The U. S. Public Health Service functions in an advisory capacity only. It has no power of enforcement.

When the ordinance is adopted it is the usual procedure to have a probationary period in which dealers and producers are given an opportunity to make the necessary changes in plant and equipment to meet the requirements. Milk under the ordinance is graded and each local health district determines what grades may be sold in that district. Usually the sale is confined to Grade A raw, and Grade A and B pasteurized. The grading is based on a score card system covering the building, equipment and bacterial content of the milk. The probationary period is 12 months and at the end of this period the grades to be sold are announced and all parties must comply. Grades have been announced in Delaware and Madison Counties. They will soon be announced in Union County. Fairfield County has adopted the ordinance and the city of Lancaster will cooperate to make it a joint operation as it is in the other counties. It is under consideration in Pickaway County.

The City of Columbus has the most extensive program of sanitary inspection and control. There are approximately 2,400 farms on the active inspection lists. Not all of these farms are selling milk to Columbus distributors for fresh milk and cream use at any one time.

The sale of milk from farms to consumers who come to the farm and bring their own containers with them, is common practice in the area. In counties that have no milk inspection under county health board supervision there are no sanitary controls over this trade. The city has no responsibility for inspection unless the milk is sold within the corporation limits. In fact, there are some instances where farmers began selling retail at the farm after they had been shut off by the city inspectors because of failure to meet the minimum sanitary requirements. Some of these farmers selling only at the farm have been classified by those who reported as producer-distributors but the sort has not been entirely accurate because many of them also sell into some other market outlet, and were so classified.

Cooperative Marketing by Producers

Cooperative associations incorporated to handle both milk and butterfat cover all the counties of the area. The Central Ohio Cooperative Milk Producers Association has membership in all the counties of the area. Producers supplying milk to Newark have a bargaining association, the Licking County Cooperative Milk Producers Association; and those supplying Lancaster are incorporated as the Lancaster County Cooperative Milk Producers Association. Both of these associations are primarily city milk supply bargaining associations. The Pickaway Cooperative Dairy is a cooperative manufacturing plant engaged in making butter and some other milk products. Its members and patrons are confined almost entirely to Pickaway County.

The Central Ohio Cooperative Milk Producers Association is incorporated to act as the sales agent for or take title to the milk or butterfat of producers, regardless of whether the outlet is a city distributing plant, a milk manufacturing plant or a butter factory. Membership at the time of the study was in a somewhat uncertain status. The Association came into existence as a consolidation of the membership of the Scioto Valley Milk Producers Association and that of the Columbus Milk Producers Association. Members of the two old associations were signed on a new contract, but to cover the period of organization the new association was designated as the sales agent for the two that were

being liquidated. No elections of officers were held in either old association in 1939, but the new contracts had not yet been put into force in July, 1940. The membership at the time of the survey consisted almost wholly of producers whose milk went to Columbus distributors. There were a few whose milk went to manufacturing plants and a few sour cream shippers.

Type of Farming

This area is on the eastern edge of the corn belt. That portion west of Columbus is better suited to corn production than that which lies east. The seven counties had a corn yield per acre in 1938 of 46 bushels, when the state average was 44 bushels. In wheat production the average yield was approximately one bushel under the average for the state. In tame hay, it was slightly above the state average. General farming with strong emphasis on livestock is the prevailing type.

Table 7 shows the importance of dairying as source of cash farm income in the area. Income from the sale of dairy products, cull dairy cows and veal calves represented 25 per cent of the cash farm income in the seven-county area for the period 1934-38. For the state as a whole, dairy income represented 28 per cent of the total cash farm income for the same period. In Delaware, Franklin, Licking and Union Counties the percentage of income received from dairying was above, while in Fairfield, Madison and Pickaway Counties, it was below state average. The percentages in these three counties was enough below the state average to bring the percentage for the area below that for the state. The influence of the cities of Columbus and Newark as markets for fresh milk and cream is reflected in the rank of the seven counties as to dairy income.

Table 7 - Important Sources of Cash Farm Income,
Percentage of Total Cash Farm Income Contributed by, and Rank of Each,
7 Central Ohio Counties, 1934-38 average

| County | Total cash farm income | Rank of sources of income and their relative importance | | | | | | | |
|------------|---------------------------|---|------------------|--------|------------------|---------|------------------|---------|------------------|
| | | First | Pct. of Total | Second | Pct. of Total | Third | Pct. of Total | Fourth | Pct. of Total |
| Delaware | \$3,414,000 | DAIRY | 43 | Hogs | 15 | Poultry | 12 | Sheep | 8 |
| Fairfield | 4,495,000 | Hogs | 30 | DAIRY | 20 | Poultry | 11 | Wheat | 10 |
| Franklin | 5,273,000 | DAIRY | 33 | Hogs | 20 | Poultry | 8 | Wheat | 8 |
| Licking | 4,969,000 | DAIRY | 36 | Hogs | 16 | Poultry | 14 | Sheep | 9 |
| Madison | 4,547,000 | Hogs | 41 | DAIRY | 13 | Wheat | 12 | Corn | 9 |
| Pickaway | 5,392,000 | Hogs | 31 | Wheat | 15 | Corn | 11 | DAIRY | 11 |
| Union | 3,723,000 | DAIRY | 30 | Hogs | 25 | Poultry | 9 | Wheat | 8 |
| 7 counties | 31,813,000 | Hogs | 26 | DAIRY | 25 | Wheat | 10 | Poultry | 9 |

Summary of Study by Counties and Townships

The material included in this section is a compilation of the information furnished by those who assisted in the mail survey supplemented by some additional data obtained in personal visits to the counties. Tables 8 to 11 and Figures 1 to 4 summarize the material for the district by counties. A discussion of each county with township analyses follows.

Table 8 summarizes the distribution of farms and cattle among the market outlets and Table 9 shows how these outlets rank as to number of cows per farm. In Table 10 the farms are distributed on a percentage basis and in Table 11 the cattle are so distributed among market outlets.

Milk sold by producer-distributors belongs in the same outlet classification as milk sold to dealers for fresh fluid consumption. In the county tables they are combined. To find the number of farms and cattle involved in supplying consumers with fresh milk it is necessary in all instances to combine the "Producer-Distributor" figures with those of "Fluid to Distributor." The total number of farms in this classification is 3744, or 31.2 per cent. These 3744 farms, however, have 42.2 per cent of the milk cattle because the larger dairy farms seek the city market outlets. The farms selling butterfat rank lowest in average number of cows per farm.

Among the counties the variation in per cent of dairy farms selling milk for fluid consumption is from 13.2 per cent for Fairfield County to 52.1 per cent for Franklin County. In the case of number of milk cows on farms selling milk for fluid consumption Fairfield County was low with 19.9 per cent and Franklin was high with 64.2 per cent. Pickaway County is highest in both per cent of farms selling butterfat and in number of milk cattle on these farms with 60.7 and 45.4 per cent respectively. Franklin County farms had only a little over 5 per cent of their milk production going through fluid milk manufacturing channels.

The figures 1 to 4, show the concentration of cows in the district. Figure 1 includes all milk cows in herds with 3 or more dairy cattle. This map shows a gradual decrease in density of cow population as distance from the city of Columbus increases with the exception of Union County where fluid manufacture has developed into an important outlet. Figure 2 shows plainly the influence of the two major markets - Columbus and Newark - on the distribution of milk cattle kept for sale of milk for fluid consumption.

The most important outlet for milk for manufacturing purposes is at Marysville where milk is drawn heavily from all of Union County and also from Delaware and part of Licking Counties. There is also an area in eastern Fairfield County where a high percentage of the milk is sold through fluid manufacturing channels. This is shown in Figure 3.

Sale of butterfat is fairly well distributed over all seven counties with the heaviest sales in Licking and Fairfield Counties.

Table 8 - Number of Dairy Farms and Number of Milk Cattle,
by Market Outlet, 7 Central Ohio Counties, 1939

| County | Producer Distributor | | Fluid to distributor | | Fluid for manufacture | | Butterfat | | Not classified | | Total | |
|--------------------|-------------------------|--------|-------------------------|--------|--------------------------|--------|-----------|--------|-------------------|--------|--------|---------|
| | Farms | Cattle | Farms | Cattle | Farms | Cattle | Farms | Cattle | Farms | Cattle | Farms | Cattle |
| Delaware | 26 | 437 | 897 | 13,129 | 552 | 6,357 | 463 | 3,697 | 46 | 523 | 1,984 | 24,143 |
| Fairfield | 35 | 556 | 262 | 4,167 | 575 | 6,623 | 972 | 8,692 | 107 | 931 | 1,951 | 20,969 |
| Franklin | 17 | 546 | 920 | 14,412 | 100 | 1,223 | 596 | 5,296 | 134 | 988 | 1,767 | 22,465 |
| Licking | 78 | 1,206 | 804 | 13,687 | 556 | 6,408 | 1,137 | 10,341 | 70 | 721 | 2,645 | 32,363 |
| Madison | 8 | 253 | 160 | 2,860 | 191 | 2,832 | 447 | 4,169 | 43 | 414 | 849 | 10,528 |
| Pickaway | 25 | 480 | 174 | 3,019 | 183 | 2,265 | 652 | 5,092 | 41 | 353 | 1,075 | 11,209 |
| Union | 13 | 175 | 325 | 4,132 | 917 | 11,285 | 406 | 3,560 | 70 | 622 | 1,731 | 20,774 |
| District totals | 202 | 3,653 | 3,542 | 56,406 | 3,074 | 36,993 | 4,673 | 40,847 | 511 | 4,552 | 12,002 | 142,451 |

Table 9 - Number of Milk Cattle per Farm by Market Outlet,
7 Central Ohio Counties, 1939

| County | Producer- Distributor | Fluid to distributor | Fluid for manufacture | Butterfat | Not classified | Total |
|------------|--------------------------|-------------------------|--------------------------|-----------|-------------------|-------|
| Delaware | 16.8 | 14.6 | 11.5 | 8.0 | 11.4 | 12.2 |
| Fairfield | 15.9 | 15.9 | 11.5 | 8.9 | 8.7 | 10.7 |
| Franklin | 32.0 | 15.7 | 12.2 | 8.9 | 7.4 | 12.7 |
| Licking | 15.5 | 17.0 | 11.5 | 9.2 | 10.3 | 12.2 |
| Madison | 28.2 | 17.9 | 14.8 | 9.3 | 9.6 | 12.4 |
| Pickaway | 19.2 | 17.4 | 12.4 | 7.8 | 8.6 | 10.4 |
| Union | 14.6 | 15.8 | 11.2 | 8.8 | 8.9 | 12.0 |
| 7 counties | 18.1 | 15.9 | 12.0 | 8.8 | 8.9 | 11.9 |

Table 10 - Number and Per cent of Dairy Farms by Market Outlet,
7 Central Ohio Counties, 1939

| County | Producer Distributor | | Fluid to distributor | | Fluid for manufacture | | Butterfat | | Not classified | | Total | |
|------------|----------------------|--------|----------------------|--------|-----------------------|--------|-----------|--------|----------------|--------|--------|--------|
| | (no.) | (pct.) | (no.) | (pct.) | (no.) | (pct.) | (no.) | (pct.) | (no.) | (pct.) | (no.) | (pct.) |
| Delaware | 26 | 1.3 | 897 | 45.3 | 552 | 27.8 | 463 | 23.3 | 46 | 2.3 | 1,984 | 100.0 |
| Fairfield | 35 | 1.8 | 262 | 13.4 | 575 | 29.5 | 972 | 49.8 | 107 | 5.5 | 1,951 | 100.0 |
| Franklin | 17 | 1.0 | 920 | 52.1 | 100 | 5.7 | 596 | 33.7 | 134 | 7.5 | 1,767 | 100.0 |
| Licking | 78 | 2.9 | 804 | 30.5 | 556 | 21.0 | 1,137 | 43.0 | 70 | 2.6 | 2,645 | 100.0 |
| Madison | 8 | .9 | 160 | 18.8 | 191 | 22.5 | 447 | 52.7 | 43 | 5.1 | 849 | 100.0 |
| Pickaway | 25 | 2.3 | 174 | 16.2 | 183 | 17.0 | 652 | 60.7 | 41 | 3.8 | 1,075 | 100.0 |
| Union | 13 | .7 | 325 | 18.8 | 917 | 53.0 | 406 | 23.5 | 70 | 4.0 | 1,731 | 100.0 |
| 7 counties | 202 | 1.7 | 3,542 | 29.5 | 3,074 | 25.6 | 4,673 | 38.9 | 511 | 4.3 | 12,002 | 100.0 |

Table 11 - Number and Per cent of Milk Cattle by Market Outlet,
7 Central Ohio Counties, 1939

| County | Producer-Distributor | | Fluid to distributor | | Fluid for manufacture | | Butterfat | | Not classified | | Total | |
|------------|----------------------|--------|----------------------|--------|-----------------------|--------|-----------|--------|----------------|--------|---------|--------|
| | (no.) | (pct.) | (no.) | (pct.) | (no.) | (pct.) | (no.) | (pct.) | (no.) | (pct.) | (no.) | (pct.) |
| Delaware | 437 | 1.8 | 13,129 | 54.4 | 6,357 | 26.3 | 3,697 | 15.3 | 523 | 2.2 | 23,143 | 100.0 |
| Fairfield | 556 | 2.7 | 4,167 | 19.9 | 6,623 | 31.6 | 8,692 | 41.4 | 931 | 4.4 | 20,969 | 100.0 |
| Franklin | 546 | 2.4 | 14,412 | 64.2 | 1,223 | 5.4 | 5,296 | 23.6 | 988 | 4.4 | 22,465 | 100.0 |
| Licking | 1,206 | 3.7 | 13,687 | 42.3 | 6,408 | 19.8 | 10,341 | 32.0 | 721 | 2.2 | 32,363 | 100.0 |
| Madison | 253 | 2.4 | 2,360 | 27.2 | 2,832 | 26.9 | 4,169 | 39.6 | 414 | 3.9 | 10,528 | 100.0 |
| Pickaway | 480 | 4.3 | 3,019 | 26.9 | 2,265 | 20.2 | 5,092 | 45.4 | 353 | 3.2 | 11,209 | 100.0 |
| Union | 175 | .9 | 5,132 | 24.7 | 11,285 | 54.3 | 3,560 | 17.1 | 622 | 3.0 | 20,774 | 100.0 |
| 7 counties | 3,653 | 2.6 | 56,406 | 39.6 | 36,993 | 26.0 | 40,847 | 28.6 | 4,552 | 3.2 | 142,451 | 100.0 |

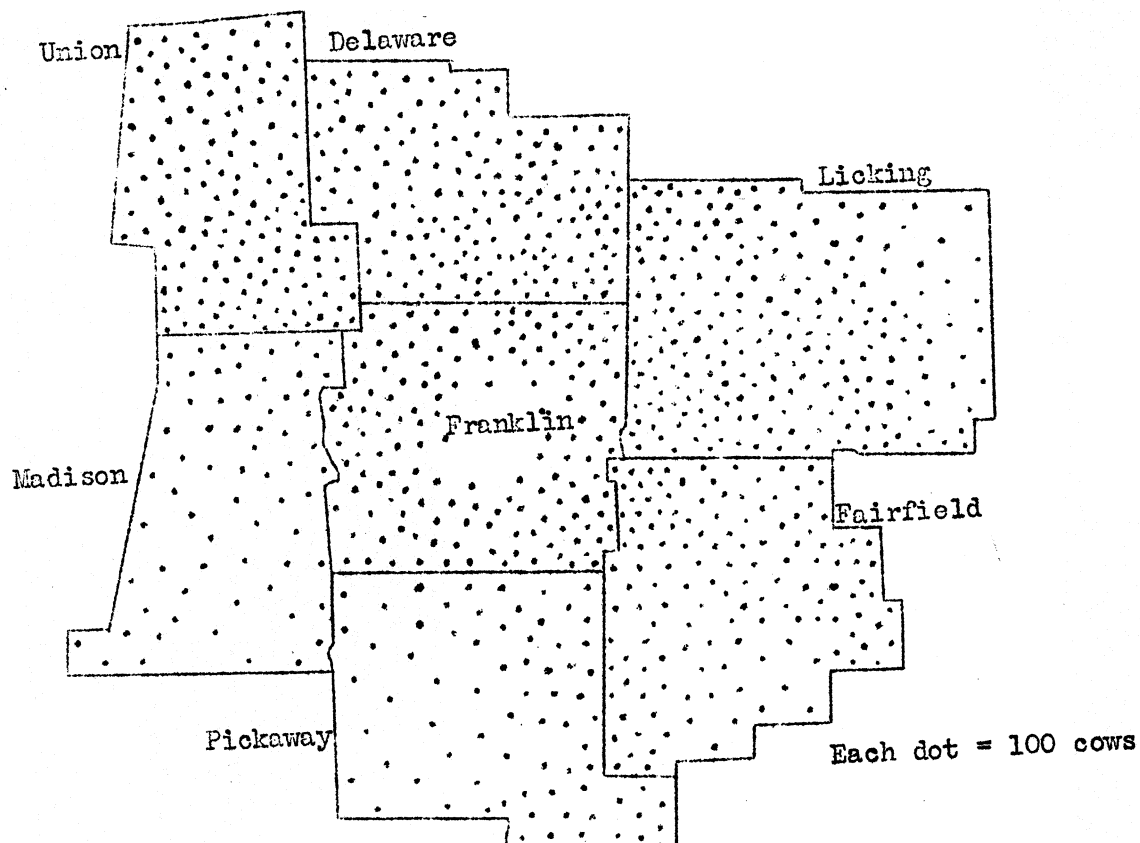


Figure 1. Cows Kept for Sale of Dairy Products

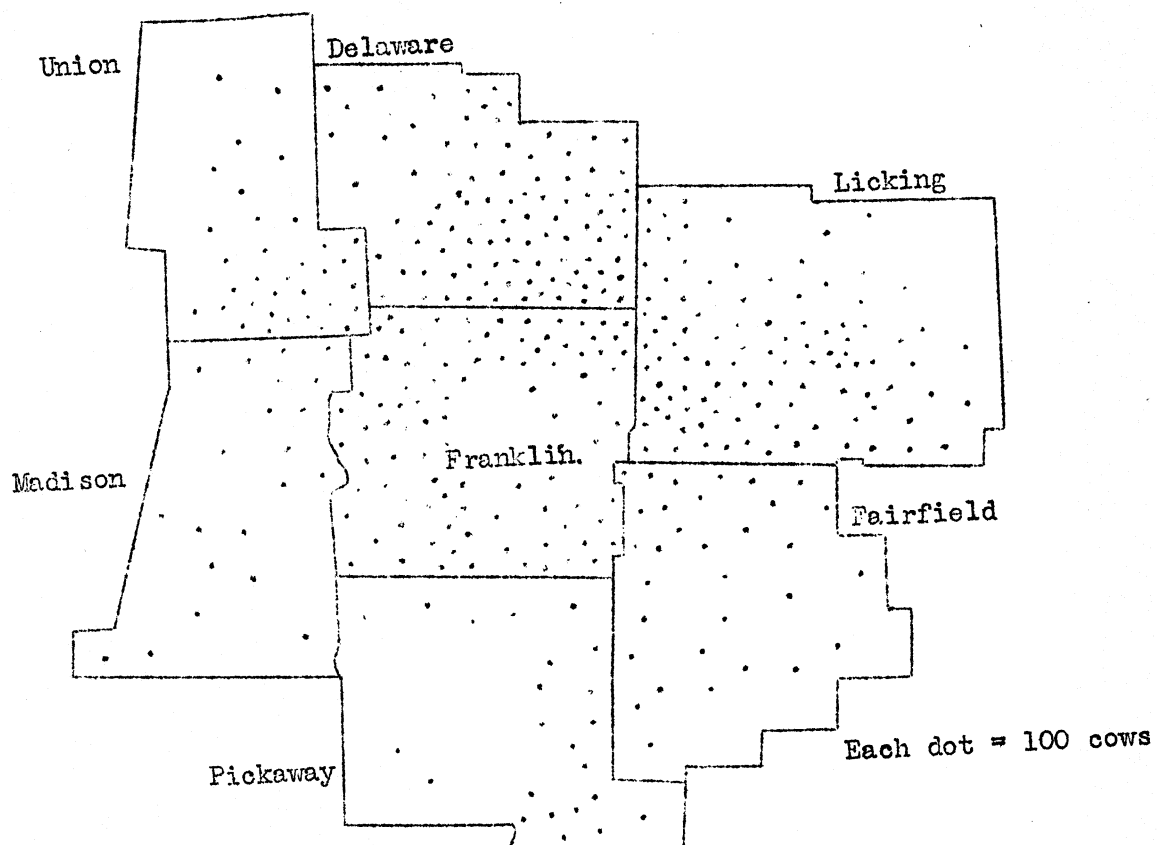


Figure 2. Cows Kept for Sale of Milk for Fluid Consumption

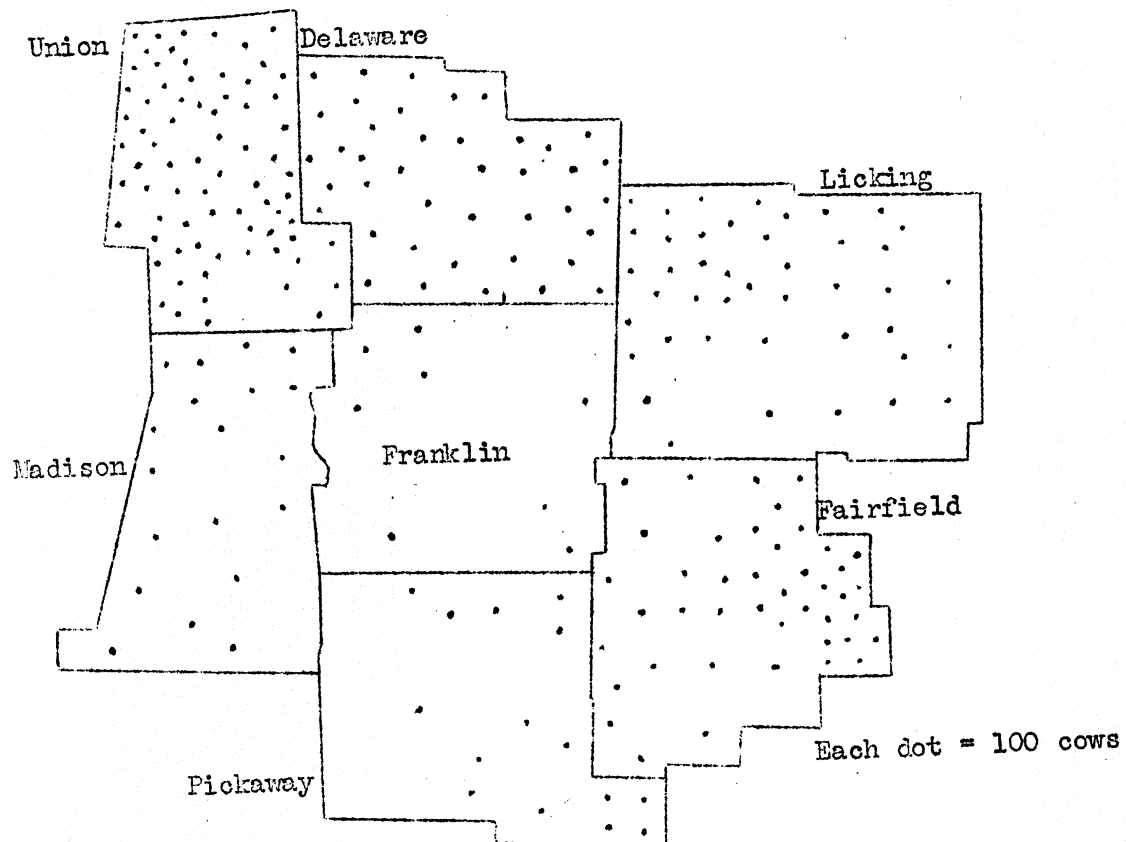


Figure 3. Cows Kept for Sale of Fluid Milk for Manufacture

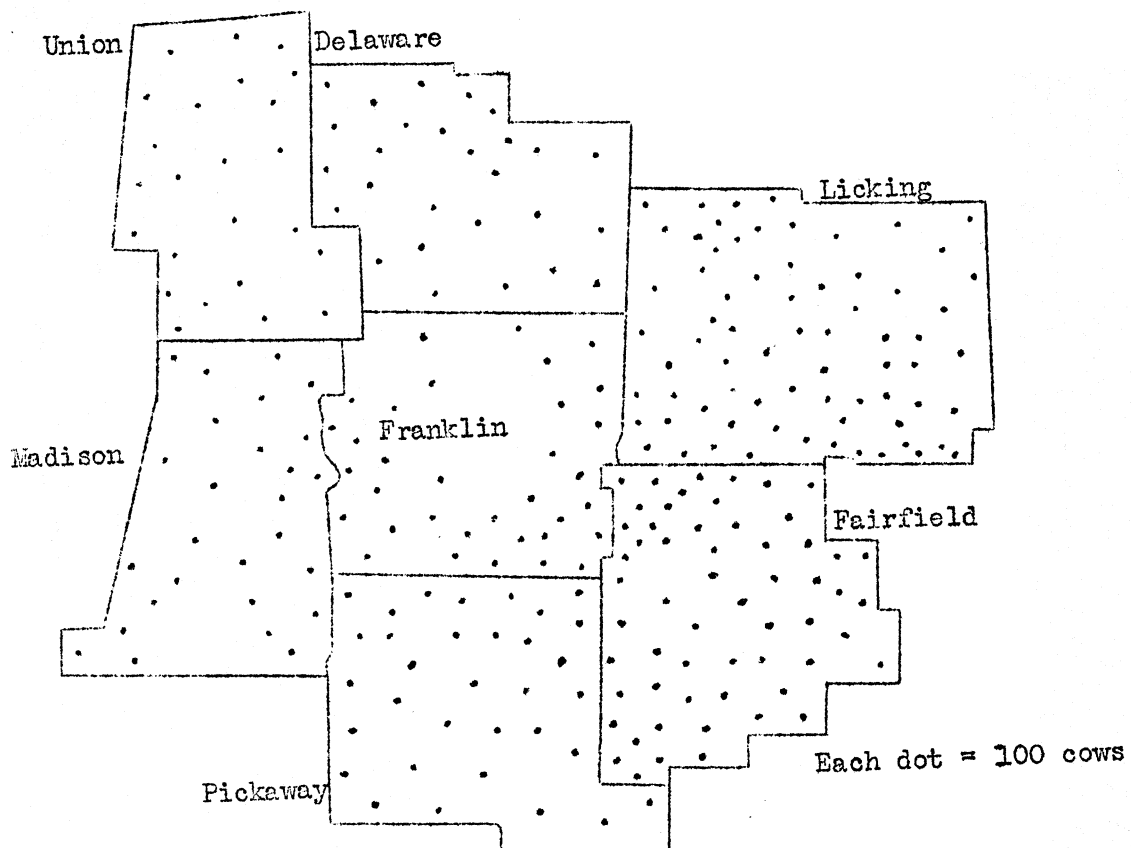


Figure 4. Cows Kept for Sale of Butterfat

Delaware County

This county has long been an important source of supply for Columbus milk dealers. The county is well adapted to dairy farming. There are no large cities in it and it therefore does not have the suburban influence upon the type of farming so evident in Franklin County. Table 12 shows that there were 7 townships in the county with more than 50 per cent of the dairy farms in the city milk classification at the time of the survey. They were Berkshire, Berlin, Genoa, Harlem, Liberty, Orange and Trenton. The farms of these 7 townships averaged two more cows per farm than all dairy farms in the county.

Two townships, Radnor and Scioto, had more farms selling to manufacturing plants than to any other outlet. Most of this milk went to the plant of Nestles Milk Products Company at Marysville in Union County. There are two plants located in Delaware County that buy milk for manufacturing, the Westerville Creamery and a receiving station of the Nestles Company at Sunbury.

The U. S. Public Health Service Milk Ordinance was adopted for the county in 1936. In 1938 the City of Delaware joined with the county and at the time of this survey the operation was on a joint basis. All dealers were required to operate under permit. Raw milk dealers were required to test for tuberculosis and Bangs disease and were strongly urged to test for mastitis. Producers selling sweet cream to consumers were required to have a permit, but the same rigid barn requirements as for raw milk were not imposed.

Mr. Willis R. Aukland, District Sanitarian reported that since the milk sanitation program has been established there has been a growing demand for pasteurized milk on the part of purchasers in the rural areas. He estimated that 96 to 98 per cent of the milk sold in the city of Delaware and the incorporated villages of the county is pasteurized. Fresh milk consumption in the city and villages has shown a marked increase. The early and efficient work of the staff of the Board of Health in Delaware County was responsible to a large measure for the introduction of the U. S. Public Health Service Ordinance in some of the other counties of the area.

The dealers operating under permit to sell milk at the time of the survey were as follows:

| <u>Distributors</u> | <u>Producer-Distributors</u> | <u>Distributing Broker</u> |
|---------------------------|------------------------------|----------------------------|
| Delaware Milk Co. | Fairland Farm Dairy | Elmer Mackan |
| Case Dairy Products, Inc. | W. B. Carson | |
| Harry Irwin | C. O. Koepfel | |
| Finley Jones | Barton Jersey Farm | |
| Parrotts Dairy | Esther Schultz Dairy | |
| Westerville Creamery | Fred White | |
| | John Sticklin | |
| | Tippecanoe Spring Dairy | |
| | Indian Springs Dairy | |

Table 12 - Number of Dairy Farms and Milk Cattle,
and Per cent of Each by Market Outlet, Delaware County, 1939

| Township | Total number of farms | Total number of milk cattle | For fluid consumption | | Fluid for manufacture | | Butterfat | | Not classified | |
|-----------|--------------------------------|--------------------------------------|--------------------------|-------------|--------------------------|-------------|-------------|-------------|-------------------|-------------|
| | | | Milk | | Milk | | Milk | | Milk | |
| | | | Farm cattle | Farm cattle | Farm cattle | Farm cattle | Farm cattle | Farm cattle | Farm cattle | Farm cattle |
| | | | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) |
| Berkshire | 114 | 1432 | 73.7 | 79.8 | 8.8 | 7.1 | 12.3 | 8.3 | 5.2 | 4.8 |
| Berlin | 144 | 1751 | 73.6 | 80.0 | 11.1 | 11.9 | 14.6 | 9.8 | .7 | .3 |
| Brown | 93 | 1205 | 35.5 | 48.0 | 25.8 | 24.1 | 31.2 | 20.5 | 7.5 | 7.4 |
| Concord | 97 | 1150 | 49.5 | 51.8 | 32.0 | 30.4 | 15.4 | 15.2 | 3.1 | 2.6 |
| Delaware | 93 | 976 | 48.4 | 53.6 | 28.0 | 24.9 | 16.1 | 12.0 | 7.5 | 9.5 |
| Genoa | 151 | 1838 | 66.9 | 73.5 | 12.6 | 12.9 | 20.5 | 13.6 | -- | -- |
| Harlem | 122 | 1671 | 61.4 | 71.3 | 23.8 | 17.7 | 11.5 | 8.9 | 3.3 | 2.1 |
| Kingston | 101 | 1409 | 38.6 | 55.6 | 36.6 | 29.1 | 24.8 | 15.3 | -- | -- |
| Liberty | 149 | 1817 | 52.3 | 67.9 | 17.5 | 16.3 | 28.2 | 15.1 | 2.0 | .7 |
| Marlboro | 47 | 380 | 8.5 | 12.6 | 38.3 | 48.7 | 53.2 | 38.7 | -- | -- |
| Orange | 105 | 1500 | 59.0 | 74.9 | 32.4 | 22.1 | 8.6 | 3.0 | -- | -- |
| Oxford | 85 | 876 | 21.2 | 34.6 | 30.6 | 33.0 | 44.7 | 28.0 | 3.5 | 4.4 |
| Porter | 105 | 1270 | 38.1 | 43.9 | 41.0 | 38.3 | 18.1 | 13.8 | 2.8 | 4.0 |
| Radnor | 108 | 1307 | 15.8 | 22.2 | 47.2 | 51.9 | 37.0 | 25.9 | -- | -- |
| Scioto | 137 | 1415 | 12.4 | 13.4 | 46.0 | 56.3 | 40.9 | 28.8 | .7 | 1.5 |
| Thompson | 97 | 1067 | 39.2 | 42.7 | 25.8 | 29.7 | 29.9 | 23.4 | 5.1 | 4.2 |
| Trenton | 133 | 2024 | 58.7 | 68.9 | 31.1 | 24.3 | 8.0 | 5.1 | 2.2 | 1.7 |
| Troy | 98 | 1055 | 37.7 | 41.5 | 31.7 | 33.2 | 30.6 | 25.3 | -- | -- |
| County | 1984 | 24143 | 46.6 | 56.2 | 27.8 | 26.3 | 23.3 | 15.3 | 2.3 | 2.2 |

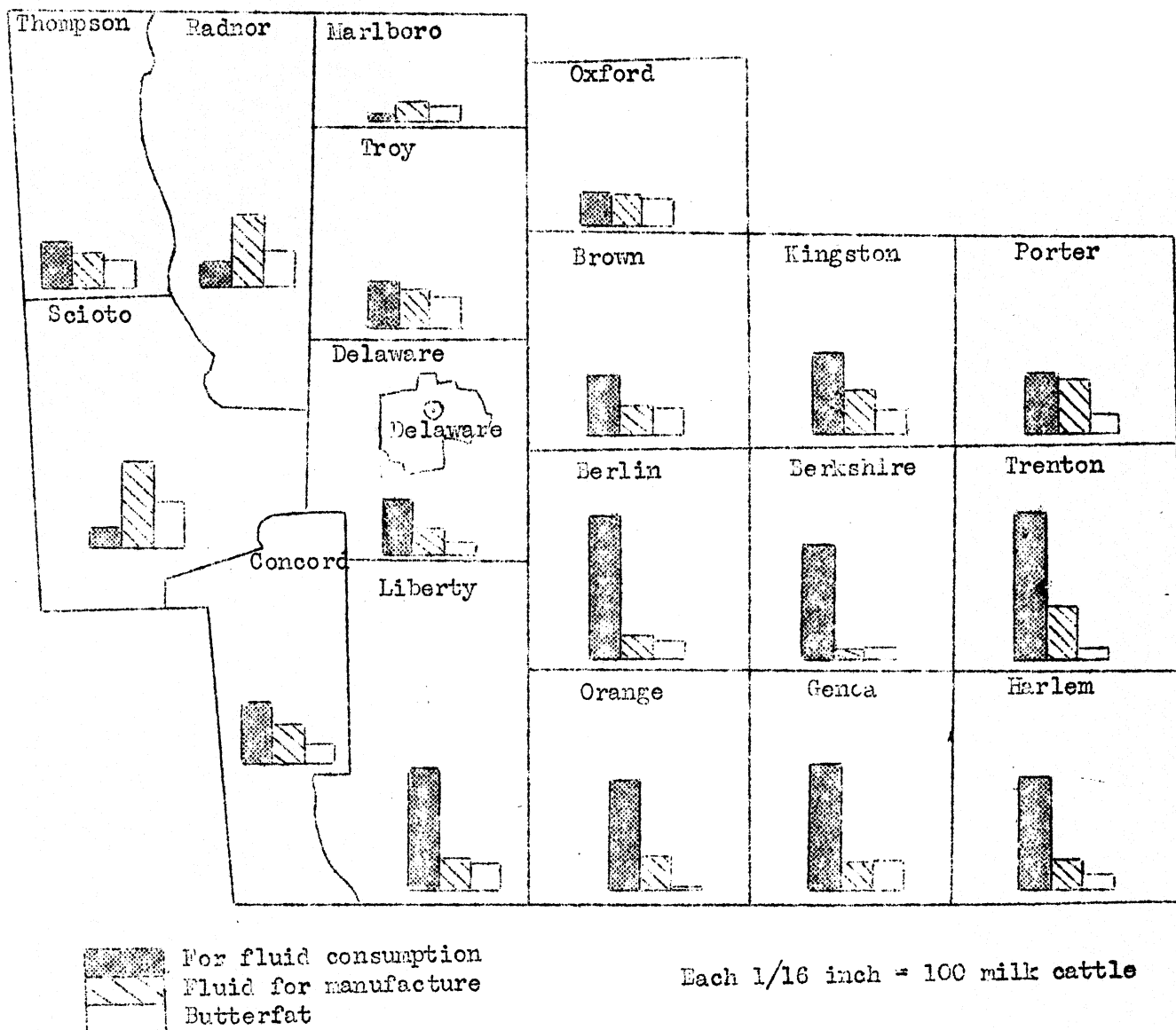


Figure 5. Number of Milk Cattle, by Market Outlet,
Delaware County, 1939

Fairfield County

Most of the milk production of the county is marketed as butterfat. There are 7 townships Amanda, Berne, Clear Creek, Hocking, Liberty, Madison and Violet, in which more than 50 per cent of the farms listed are selling butterfat. There is no township in the county that has as many farms selling to city dealers as are selling butterfat.

The county has a market for manufacturing milk in the Bremen Cheese Factory making American cheese. Some milk for manufacture also moves into Columbus.

The county and the town of Lancaster were in the process of going under the U. S. Public Health Service Milk Ordinance when the survey was made. The Ordinance was passed by the county in June and was before the Council in Lancaster in July. It was expected that all producers would pay a permit fee of \$1.00. No list of dealers was available at the time of the survey.

Table 13 - Number of Dairy Farms and Milk Cattle,
and Per cent of Each by Market Outlet, Fairfield County, 1939

| Township | Total number of farms | Total number of milk cattle | For fluid consumption | | Fluid for manufacture | | Butterfat | | Not classified | |
|-------------|--------------------------------|--------------------------------------|--------------------------|-------------|--------------------------|-------------|-------------|-------------|-------------------|-------------|
| | | | Milk | | Milk | | Milk | | Milk | |
| | | | Farm cattle | Farm cattle | Farm cattle | Farm cattle | Farm cattle | Farm cattle | Farm cattle | Farm cattle |
| | | | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) |
| Amanda | 143 | 1486 | 17.5 | 22.2 | 25.9 | 29.1 | 52.4 | 45.2 | 4.2 | 3.5 |
| Berne | 112 | 1028 | 9.8 | 21.0 | 8.9 | 11.1 | 81.3 | 67.9 | - | - |
| Bloom | 131 | 1305 | 15.3 | 24.7 | 23.7 | 24.6 | 46.5 | 37.2 | 14.5 | 13.5 |
| Clear Creek | 153 | 1395 | 8.5 | 10.6 | 25.5 | 26.7 | 66.0 | 62.7 | - | - |
| Greenfield | 153 | 1582 | 15.1 | 22.1 | 37.2 | 39.5 | 38.6 | 29.4 | 9.1 | 9.0 |
| Hocking | 125 | 1205 | 22.4 | 36.4 | 13.6 | 16.9 | 62.4 | 45.9 | 1.6 | .8 |
| Liberty | 229 | 2332 | 19.6 | 31.8 | 14.8 | 14.4 | 54.2 | 44.4 | 11.4 | 9.4 |
| Madison | 57 | 523 | 10.5 | 7.8 | 21.1 | 20.3 | 61.4 | 65.4 | 7.0 | 6.5 |
| Pleasant | 148 | 1751 | 11.5 | 11.0 | 43.9 | 52.0 | 37.8 | 31.9 | 6.8 | 5.1 |
| Richland | 123 | 1495 | 4.1 | 5.1 | 57.7 | 57.5 | 38.2 | 37.4 | - | - |
| Rushcreek | 159 | 1468 | 1.9 | 2.5 | 67.3 | 61.1 | 27.7 | 23.8 | 3.1 | 2.6 |
| Violet | 228 | 3096 | 27.6 | 38.6 | 10.5 | 11.2 | 54.9 | 45.5 | 7.0 | 4.7 |
| Walnut | 190 | 2303 | 20.0 | 27.4 | 37.4 | 41.5 | 40.0 | 30.1 | 2.6 | 1.0 |
| County | 1951 | 20969 | 15.2 | 22.6 | 29.5 | 31.6 | 49.8 | 41.4 | 5.5 | 4.4 |

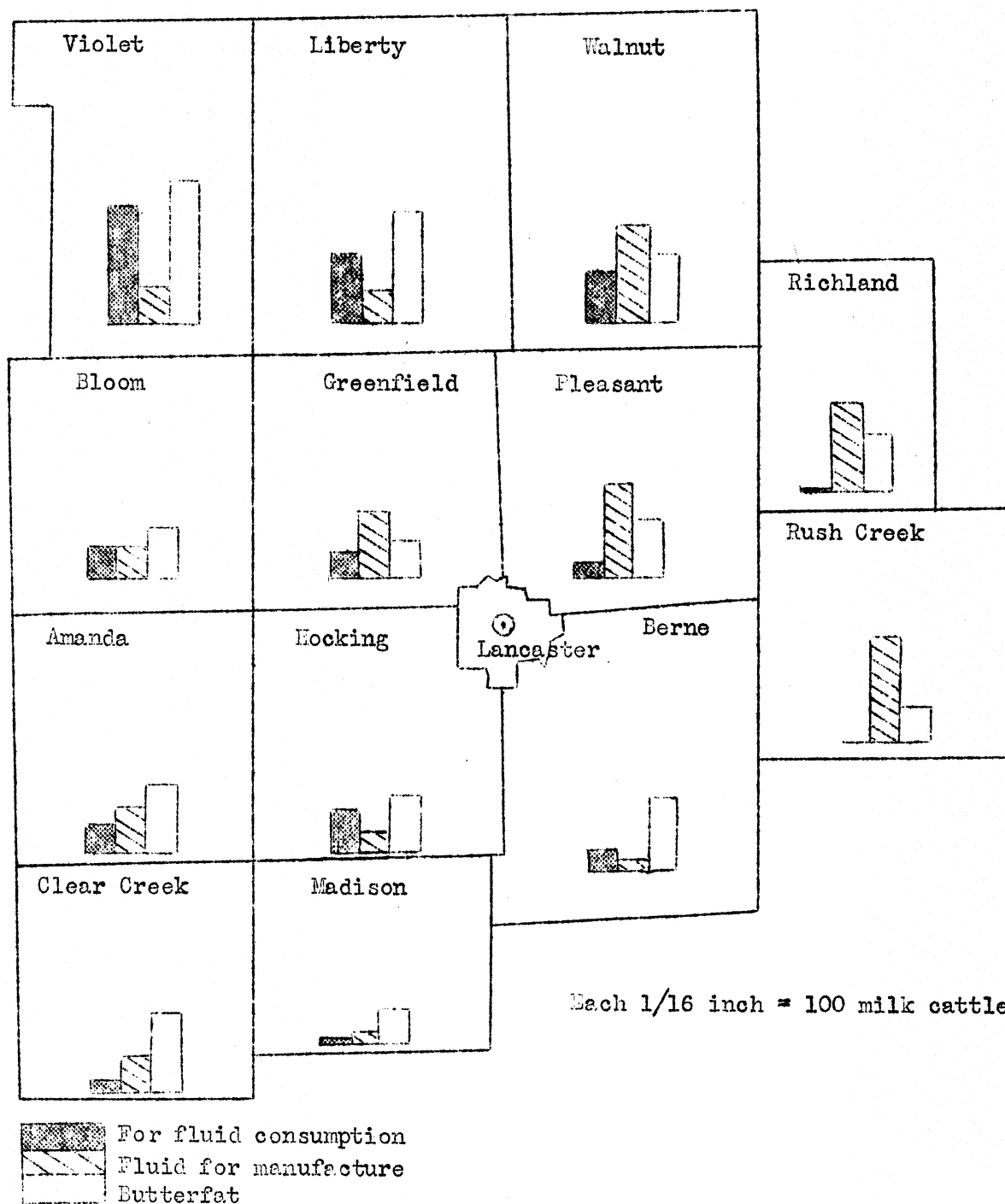


Figure 6. Number of Milk Cattle, by Market Outlet,
Fairfield County, 1939

Franklin County

Columbus and its suburbs constitute the largest concentration of population within the area. As a result it makes Franklin County the focal center of market outlets. Here is to be found the greatest number of milk distributors and the greatest concentration of manufacturing plants.

The City of Columbus through its Board of Health inspects all farms from which milk is sold for fresh consumption in Columbus. The plants under permit to sell in July, 1940 were as follows:

| <u>Distributors</u> | <u>Producer-Distributors</u> | <u>Distributing Brokers</u> |
|----------------------------|------------------------------|---------------------------------|
| Allen Milk Company | Ralph Barr | |
| J. R. Brandt | Black Bros. | Economy Dairy |
| E. C. Chambers | H. L. Gable & Son | Ed. Hess |
| M. E. Chambers | Pat Griffin | Orville Rader |
| Corbin Bros. | Fred Hastilow | |
| Diamond Dairy Products Co. | | |
| Dererfield Dairy | H. G. Henderlick | |
| DeWitt Milk Co. | Indian Springs Dairy | |
| H. F. Distelhorst | A. Keller | |
| Farmers Cooperative Dairy | A. R. McClish | |
| Fairmont Creamery Co. | C. E. North & Son | |
| | | |
| Gall Milk Co. | Oren Potter | |
| Gibson Milk Co. | A. J. Reinhard | |
| Hamilton Milk Co. | Chas. Saler | |
| High Grade Milk Co. | John Schaaf | |
| Home Producers | C. W. Schacht | |
| | | |
| Isaly Dairy Co. | Floyd Schleppe | |
| R. Moore | E. Scott | |
| Model Dairy | Shady Lane Dairy Co. | |
| Moore & Ross Milk Co. | P. Siegman | |
| Paillet Milk Co. | Smith Bros. | |
| | | |
| Pestel Milk Co. | Timmons Dairy | |
| Richer Dairy Co. | L. O. Walcutt | |
| Scioto Valley Milk & Ice | E. M. Ward & Son | |
| Cream Co. | Ray Weatherell | |
| Mrs. G. H. Slonaker | W. Wittman | |
| Westerville Creamery Co. | John Wolfe | |
| Youngs Dairy | | |

There were 1,767 farms on which 3 or more dairy cattle were tested. A large portion of the county outside the city and village corporations is suburban in character. Of the 18 townships there were 8 that had more than 100 farms in the survey. In these eight townships which are representative of the rural area of the county, 53.5 per cent of the farmers with 65.3 per cent of the cows were selling to city milk dealers. This indicates that there is no great economic pressure that forces the farmers immediately adjacent to Columbus into intensive dairying. This is due in large part to good transportation from adjacent counties, and lack of adaptability of many farms in Franklin County to dairying.

Table 14 - Number of Dairy Farms and Milk Cattle,
and Per cent of Each by Market Outlet, Franklin County, 1939

| Township | Total number of farms | Total number of milk cattle | For fluid consumption | | Fluid for manufacture | | Butterfat | | Not classified | |
|------------|--------------------------------|--------------------------------------|--------------------------|--------|--------------------------|--------|-----------|--------|-------------------|--------|
| | | | Milk | | Milk | | Milk | | Milk | |
| | | | Farm | cattle | Farm | cattle | Farm | cattle | Farm | cattle |
| | | | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) |
| Blendon | 149 | 1671 | 59.8 | 74.9 | - | - | 32.2 | 19.7 | 8.0 | 5.4 |
| Brown | 88 | 1191 | 48.9 | 55.9 | 5.7 | 4.2 | 42.0 | 38.8 | 3.4 | 1.1 |
| Clinton | 36 | 357 | 38.9 | 57.7 | 11.1 | 16.3 | 16.7 | 12.0 | 33.3 | 14.0 |
| Franklin | 61 | 755 | 65.6 | 79.9 | - | - | 21.3 | 11.9 | 13.1 | 8.2 |
| Hamilton | 79 | 1168 | 35.5 | 56.1 | - | - | 63.2 | 43.6 | 1.3 | .3 |
| Jackson | 147 | 1890 | 64.0 | 73.1 | 2.7 | 3.7 | 25.2 | 20.1 | 8.1 | 3.1 |
| Jefferson | 98 | 1050 | 34.7 | 47.4 | 11.2 | 11.6 | 49.0 | 37.8 | 5.1 | 3.2 |
| Madison | 211 | 3018 | 38.4 | 54.8 | 8.1 | 9.9 | 50.2 | 32.7 | 3.3 | 2.6 |
| Marion | 21 | 212 | 28.6 | 51.9 | - | - | 28.6 | 14.2 | 42.8 | 33.9 |
| Mifflin | 31 | 356 | 80.6 | 89.6 | - | - | 9.7 | 6.2 | 9.7 | 4.2 |
| Norwich | 103 | 1265 | 70.0 | 82.1 | 5.8 | 4.5 | 22.3 | 12.6 | 1.9 | .8 |
| Perry | 148 | 1566 | 49.3 | 62.4 | 14.9 | 15.4 | 30.4 | 19.3 | 5.4 | 2.9 |
| Plain | 118 | 1617 | 71.2 | 80.5 | 5.1 | 4.5 | 18.6 | 12.8 | 5.1 | 2.2 |
| Pleasant | 124 | 1422 | 49.2 | 56.5 | 1.6 | 1.1 | 40.3 | 35.2 | 8.9 | 7.2 |
| Prairie | 118 | 1335 | 47.5 | 62.4 | - | - | 51.7 | 36.6 | .8 | 1.0 |
| Sharon | 63 | 1074 | 73.0 | 87.7 | 6.3 | 4.7 | 3.2 | 1.4 | 17.5 | 6.2 |
| Truro | 84 | 1409 | 47.6 | 69.9 | - | - | 38.1 | 22.9 | 14.3 | 7.2 |
| Washington | 88 | 1109 | 57.9 | 66.0 | 21.6 | 17.0 | 8.0 | 4.6 | 12.5 | 12.4 |
| County | 1767 | 22465 | 53.1 | 66.6 | 5.7 | 5.4 | 33.7 | 23.6 | 7.5 | 4.4 |

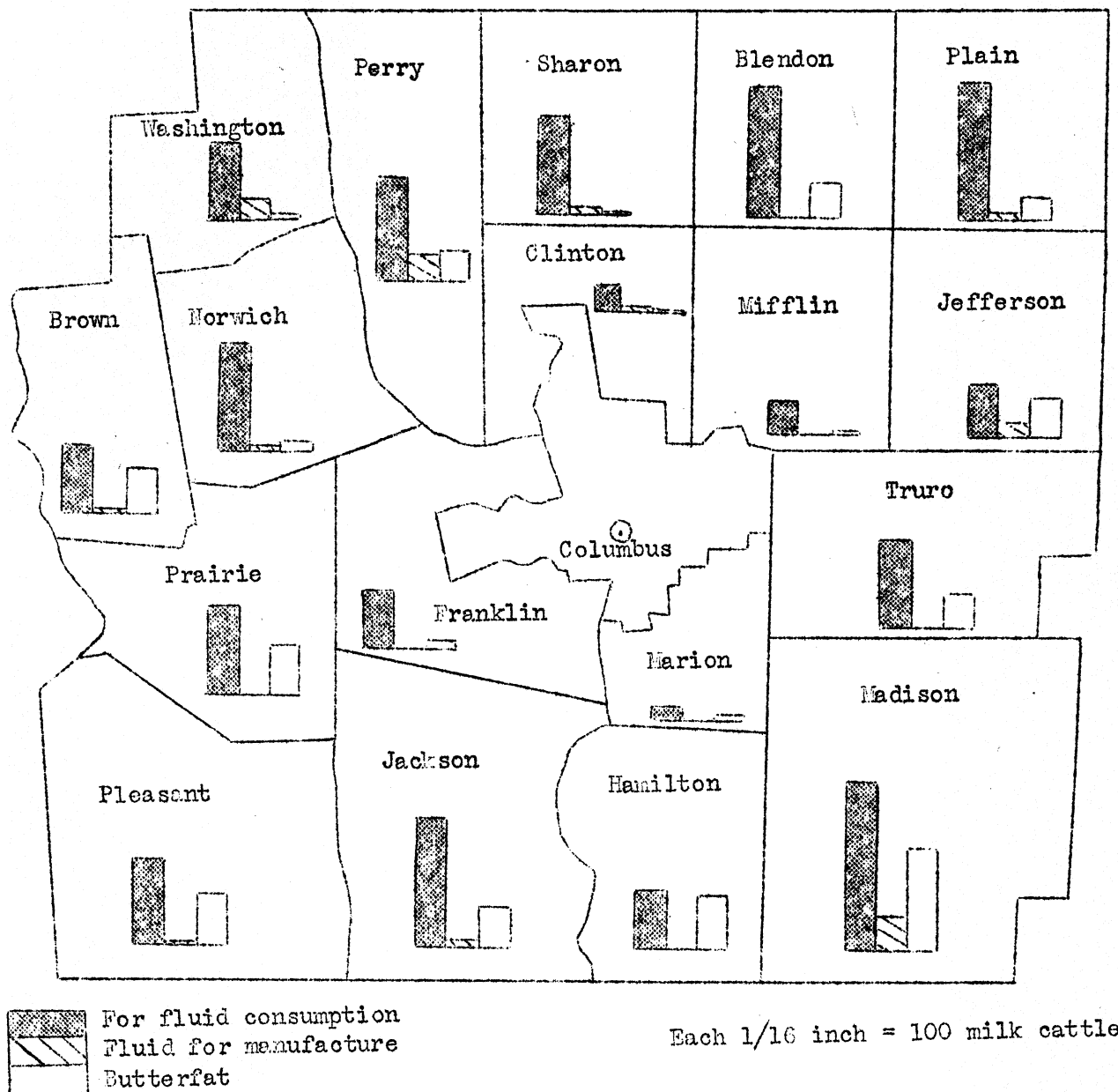


Figure 7. Number of Milk Cattle, by Market Outlet, Franklin County, 1939

Licking County

This county has more variable conditions with respect to outlets than the other counties of the area. The northeastern townships are an important part of the Columbus milk shed. There were four townships in which more than half the dairy farms were selling to city milk dealers. They were, Granville, Harrison, Jersey and Newark. Because of higher average of cows per farm on the city milk farms there were five other townships in which less than half the farms were classified in city milk, but more than 50 per cent of the cows were in this classification. They were Hartford, Lima, Monroe, St. Albans and Union. Eden Township was the only one in which the manufacturing outlet dominated. In eight of the remaining counties more farms were selling butterfat than all other outlets combined.

Most of the milk sold for manufacturing went to the Carnation Company at Coshocton and the M & R Dietetic Laboratory at Columbus. There was a market for some milk for manufacture in Newark. A small amount in the southeastern part of the county was going to the cheese factory at Bremen.

There was no county milk sanitation program in effect at the time of the survey. The City of Newark was supervising farms and plants. The plants under supervision by the Newark Board of Health were as follows:

DistributorsPlants, pasteurizing:

Furnas-Borden Milk Co.
Ed. Ross Dairy
Independent Dairy
Joe Spencer
Ralph Gebhart

Spring Brook Dairy
North Park Dairy
Claggett Dairy
Kelley Dairy
Mast Dairy

Alice Evans Dairy
Davis Company
Jay Butler

Producer-DistributorsRaw milk

Parkinson Dairy
W. B. Hoskinson Dairy
Charles Linn
Robert Swisher
Joseph Murphey

William Murphey
Horatio Holtz
Pete Sabo
BrynDu Dairy
Daniels'

Homer Shaw
G. P. Orr

Table 15 - Number of Dairy Farms and Milk Cattle
and Per cent of Each by Market Outlet, Licking County, 1939

| Township | Total number of farms | Total number of milk cattle | For fluid consumption | | Fluid for manufacture | | Butterfat | | Not classified | |
|-------------|--------------------------------|--------------------------------------|--------------------------|--------|--------------------------|--------|-----------|--------|-------------------|--------|
| | | | Milk | | Milk | | Milk | | Milk | |
| | | | Farm | Farm | Farm | Farm | Farm | Farm | Farm | Farm |
| | | | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) |
| Bernington | 139 | 1546 | 5.8 | 8.9 | 26.6 | 32.2 | 66.2 | 58.1 | 1.4 | .8 |
| Bowling Gr. | 89 | 1129 | 25.8 | 28.8 | 2.3 | 1.4 | 69.6 | 67.3 | 2.3 | 2.5 |
| Burlington | 101 | 1056 | 5.0 | 5.8 | 47.5 | 49.5 | 47.5 | 44.7 | - | - |
| Eden | 71 | 543 | - | - | 62.0 | 71.1 | 36.6 | 28.2 | 1.4 | .7 |
| Etna | 102 | 1125 | 38.2 | 49.4 | 8.8 | 7.9 | 47.1 | 36.6 | 5.9 | 6.1 |
| Fallsburg | 55 | 283 | - | - | 14.6 | 16.9 | 85.4 | 83.1 | - | - |
| Franklin | 87 | 1058 | 27.6 | 37.1 | 12.6 | 11.8 | 50.6 | 43.3 | 9.2 | 7.8 |
| Granville | 106 | 1590 | 57.5 | 67.7 | 14.2 | 13.9 | 26.4 | 17.3 | 1.9 | 1.1 |
| Hanover | 56 | 456 | 19.7 | 25.9 | 30.3 | 35.3 | 46.4 | 35.3 | 3.6 | 3.5 |
| Harrison | 114 | 1711 | 59.7 | 71.3 | - | - | 36.8 | 24.8 | 3.5 | 3.9 |
| Hartford | 129 | 1876 | 41.1 | 51.1 | 35.7 | 33.0 | 23.2 | 15.9 | - | - |
| Hopewell | 40 | 408 | 27.5 | 33.6 | 22.5 | 21.6 | 37.5 | 27.7 | 12.5 | 17.1 |
| Jersey | 144 | 2040 | 53.5 | 64.6 | 23.6 | 21.3 | 22.9 | 14.1 | - | - |
| Licking | 131 | 1806 | 32.1 | 45.8 | 8.4 | 10.1 | 58.0 | 43.3 | 1.5 | .8 |
| Liberty | 108 | 1294 | 25.9 | 30.8 | 35.2 | 41.6 | 38.0 | 26.2 | .9 | 1.4 |
| Lima | 125 | 2241 | 47.2 | 64.5 | 10.4 | 9.1 | 40.0 | 25.3 | 2.4 | 1.1 |
| Madison | 120 | 1326 | 25.0 | 33.2 | 23.3 | 21.8 | 48.4 | 43.0 | 3.3 | 2.0 |
| McKean | 118 | 1261 | 22.9 | 33.7 | 28.0 | 31.2 | 49.1 | 35.1 | - | - |
| Mary Ann | 60 | 535 | 18.4 | 32.3 | 30.0 | 29.3 | 51.6 | 38.4 | - | - |
| Monroe | 108 | 1406 | 43.6 | 53.1 | 34.2 | 31.8 | 18.5 | 12.0 | 3.7 | 3.1 |
| Newark | 133 | 1704 | 64.6 | 73.9 | 9.8 | 7.6 | 20.3 | 14.9 | 5.3 | 3.6 |
| Newton | 97 | 1023 | 36.1 | 44.1 | 13.4 | 11.4 | 50.5 | 44.5 | - | - |
| Perry | 52 | 410 | - | - | 23.1 | 33.9 | 76.9 | 66.1 | - | - |
| St. Albans | 114 | 1659 | 46.5 | 59.5 | 10.5 | 9.3 | 38.6 | 29.2 | 4.4 | 2.0 |
| Union | 161 | 2105 | 39.8 | 57.3 | 6.8 | 6.1 | 49.7 | 34.0 | 3.7 | 2.6 |
| Washington | 85 | 772 | 23.6 | 29.9 | 43.5 | 41.7 | 25.9 | 18.3 | 7.0 | 10.1 |
| County | 2645 | 32363 | 33.4 | 46.0 | 21.0 | 19.8 | 43.0 | 32.0 | 2.6 | 2.2 |

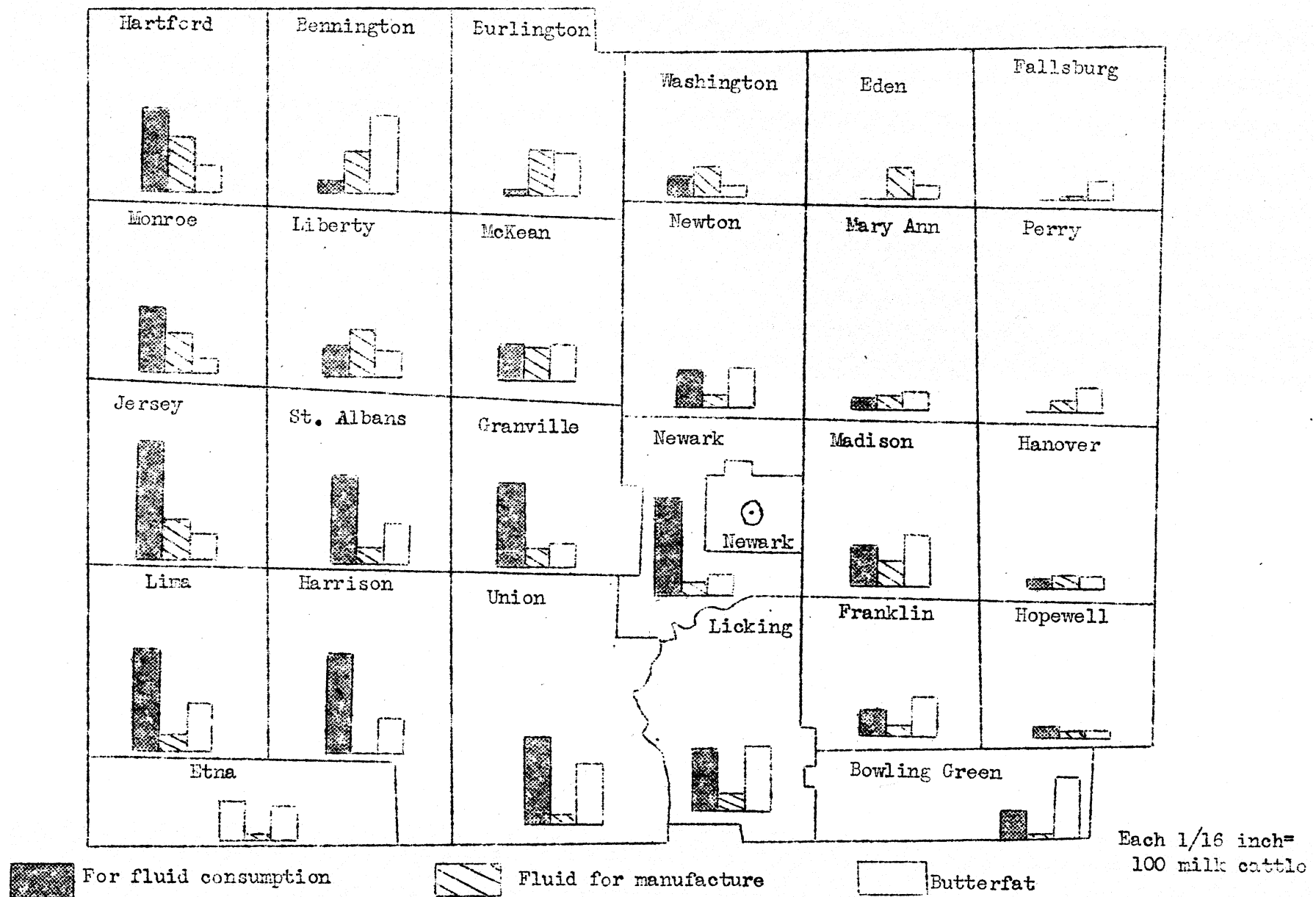


Figure 8. Number of Milk Cattle, by Market Outlet, Licking County, 1939

Madison County

Madison County was predominantly a butterfat producing area at the time of the survey. There were only two townships with any considerable number of farms going to city milk dealers. They were Canaan and Darby, with 36 and 35 farms, respectively. There was no other township with more than 20 farms going to city milk dealers. Of 851 farms in the survey, 447 were selling butterfat and 191 were selling to milk manufacturing plants.

The county is at present going under joint county and city operation of the U. S. Public Health Service Milk Ordinance. There were at the time of the survey 26 producers under permit. The fee charged is \$1.00. The dealers operating in Madison County were:

Distributors

Smith Dairy

Producer-Distributors

Leach Dairy
L. O. Walcutt
Joseph Taylor
Hershel Campbell
Ridenour Bros. Dairy
James Timmons
Russel Hill

Table 16 - Number of Dairy Farms and Milk Cattle
and Per cent of Each by Market Outlet, Madison County, 1939

| Township | Total number of farms | Total number of milk cattle | <u>For fluid</u> <u>consumption</u> Milk | | <u>Fluid for</u> <u>manufacture</u> Milk | | <u>Butterfat</u> Milk | | <u>Not</u> <u>classified</u> Milk | |
|------------|--------------------------------|--------------------------------------|--|--------|--|--------|--------------------------|--------|---|--------|
| | | | Farm | cattle | Farm | cattle | Farm | cattle | Farm | cattle |
| | | | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) |
| Canaan | 89 | 1211 | 40.5 | 51.5 | 23.6 | 22.6 | 29.2 | 22.2 | 6.7 | 3.7 |
| Darby | 75 | 1001 | 46.7 | 53.0 | 28.0 | 33.1 | 25.3 | 13.9 | - | - |
| Deer Creek | 34 | 378 | 5.9 | 10.8 | 14.7 | 11.9 | 70.6 | 58.5 | 8.8 | 18.8 |
| Fairfield | 65 | 523 | 9.2 | 10.3 | 9.2 | 13.6 | 78.5 | 72.1 | 3.1 | 4.0 |
| Jefferson | 111 | 1512 | 12.6 | 30.6 | 13.5 | 14.7 | 72.1 | 53.4 | 1.8 | 1.3 |
| Monroe | 43 | 595 | 6.9 | 11.6 | 41.9 | 49.6 | 46.5 | 34.6 | 4.7 | 4.2 |
| Oak Run | 30 | 523 | 20.0 | 21.0 | 20.0 | 32.5 | 60.0 | 46.5 | - | - |
| Paint | 69 | 750 | 7.2 | 6.9 | 8.7 | 13.1 | 63.8 | 64.5 | 20.3 | 15.5 |
| Pike | 61 | 756 | 9.8 | 16.0 | 42.7 | 49.5 | 45.9 | 33.9 | 1.6 | .6 |
| Pleasant | 65 | 631 | 16.9 | 31.1 | 6.2 | 10.1 | 75.4 | 57.5 | 1.5 | 1.3 |
| Range | 24 | 355 | 12.5 | 12.1 | 54.1 | 71.5 | 16.7 | 8.2 | 16.7 | 8.2 |
| Stokes | 67 | 754 | 22.4 | 32.2 | 8.9 | 13.4 | 67.2 | 52.4 | 1.5 | 2.0 |
| Summerford | 53 | 615 | 7.5 | 11.4 | 41.5 | 49.3 | 37.8 | 29.6 | 13.2 | 9.7 |
| Union | 63 | 924 | 34.9 | 58.1 | 34.9 | 22.6 | 30.2 | 19.3 | - | - |
| County | 849 | 10528 | 19.7 | 29.6 | 22.5 | 26.9 | 52.7 | 39.6 | 5.1 | 3.9 |

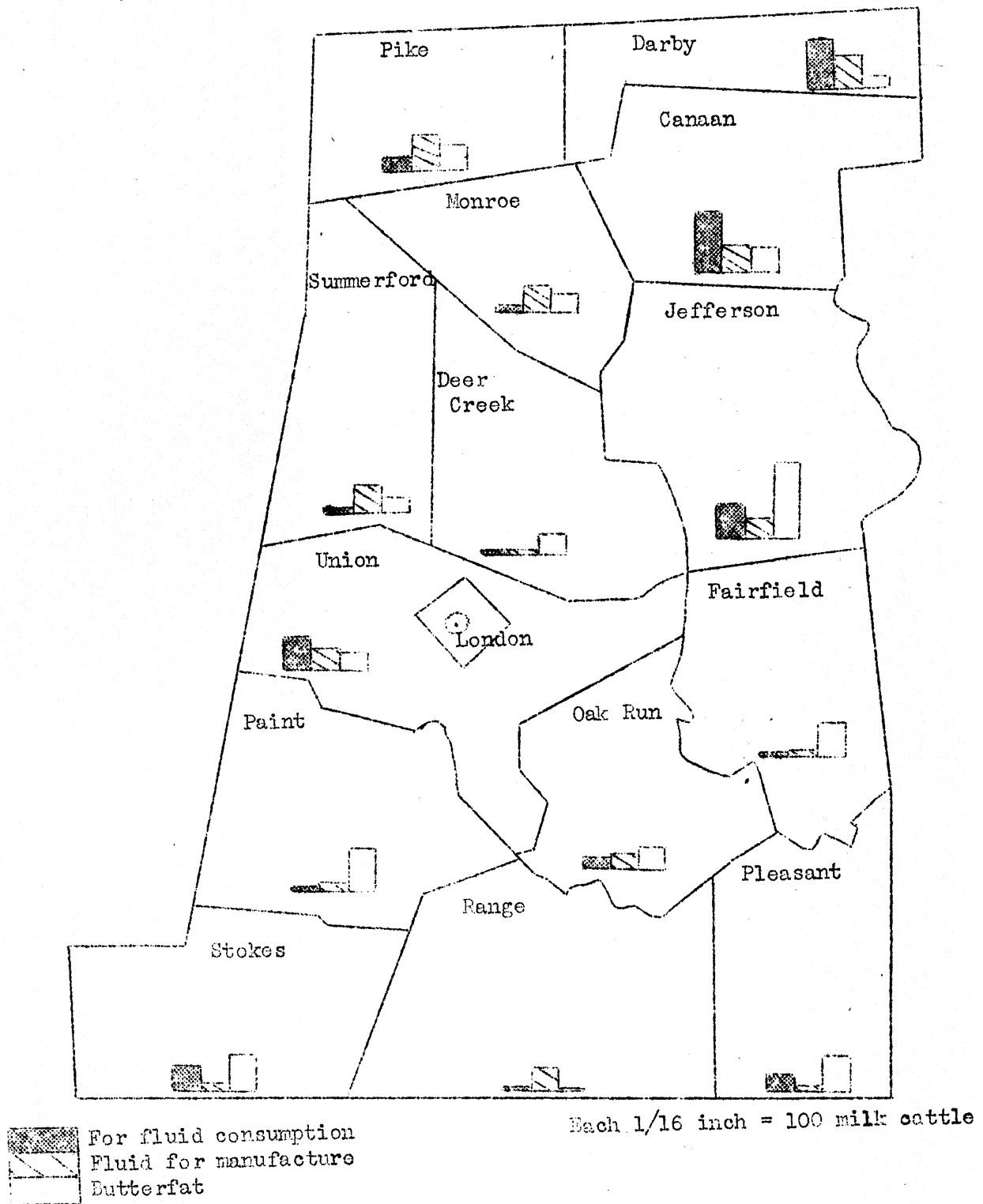


Figure 9. Number of Milk Cattle, by Market Outlet, Madison County, 1939

Pickaway County

This county, like Madison, is predominantly a butterfat county. Of 1075 farms in the survey, 652 were selling butterfat and 183 milk for manufacturing. There were only three townships in which milk for city use assumed any importance. They were Pickaway, Walnut and Washington. The three townships had a total of 108 farms in this class.

At the time of the survey there was no sanitary inspection of plants or farms by either the town of Circleville, or the county. The U. S. Public Health Service Milk Ordinance had gone through three readings in the Council at Circleville but was tabled for further information.

The dealers distributing in Circleville were:

Distributors

Robinson Dairy
Blue Ribbon Dairy
David Harmon

Producer-Distributors

Mrs. Abbie Gussman
Hines Dairy

Table 17 - Number of Dairy Farms and Milk Cattle
and Per cent of Each by Market Outlet, Pickaway County, 1939

| Township | Total number of farms | Total number of milk cattle | <u>For fluid</u> <u>consumption</u> <u>Milk</u> | | <u>Fluid for</u> <u>manufacture</u> <u>Milk</u> | | <u>Butterfat</u> <u>Milk</u> | | <u>Not</u> <u>classified</u> <u>Milk</u> | |
|-------------|--------------------------------|--------------------------------------|---|--------|---|--------|---------------------------------|--------|--|--------|
| | | | Farm cattle | | Farm cattle | | Farm cattle | | Farm cattle | |
| | | | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) |
| Circleville | 34 | 372 | 32.4 | 47.9 | 26.5 | 23.1 | 38.2 | 27.1 | 2.9 | 1.9 |
| Darby | 65 | 543 | 13.8 | 18.8 | 6.2 | 11.2 | 80.0 | 70.0 | - | - |
| Deer Creek | 59 | 516 | 15.3 | 31.0 | - | - | 83.0 | 67.6 | 1.7 | 1.4 |
| Harrison | 57 | 755 | 10.6 | 15.1 | 15.8 | 18.7 | 70.1 | 63.4 | 3.5 | 2.8 |
| Jackson | 71 | 663 | 2.8 | 2.3 | 14.1 | 16.4 | 78.9 | 77.2 | 4.2 | 4.1 |
| Madison | 71 | 770 | 15.5 | 27.7 | 9.9 | 6.6 | 70.4 | 62.6 | 4.2 | 3.1 |
| Monroe | 60 | 456 | 1.7 | 1.5 | 6.0 | 5.0 | 85.0 | 86.2 | 8.3 | 7.3 |
| Muhlenberg | 43 | 281 | 4.7 | 3.6 | 4.7 | 6.0 | 79.0 | 76.5 | 11.6 | 13.9 |
| Perry | 50 | 422 | 4.0 | 14.2 | 2.0 | 2.4 | 90.0 | 77.0 | 4.0 | 6.4 |
| Pickaway | 100 | 1519 | 45.0 | 68.7 | 16.0 | 11.7 | 32.0 | 14.3 | 7.0 | 5.3 |
| Salt Creek | 100 | 1087 | 13.0 | 13.5 | 46.0 | 60.6 | 41.0 | 25.9 | - | - |
| Scioto | 125 | 1117 | 14.4 | 23.5 | 24.8 | 26.8 | 60.0 | 48.4 | .8 | 1.3 |
| Walnut | 124 | 1393 | 29.8 | 46.7 | 8.1 | 13.8 | 53.2 | 34.2 | 8.9 | 5.3 |
| Washington | 69 | 818 | 46.4 | 61.4 | 17.4 | 17.0 | 36.2 | 21.6 | - | - |
| Wayne | 47 | 497 | 2.2 | 6.8 | 48.9 | 60.4 | 48.9 | 32.8 | - | - |
| County | 1075 | 11209 | 18.5 | 31.2 | 17.0 | 20.2 | 60.7 | 45.4 | 3.8 | 3.2 |

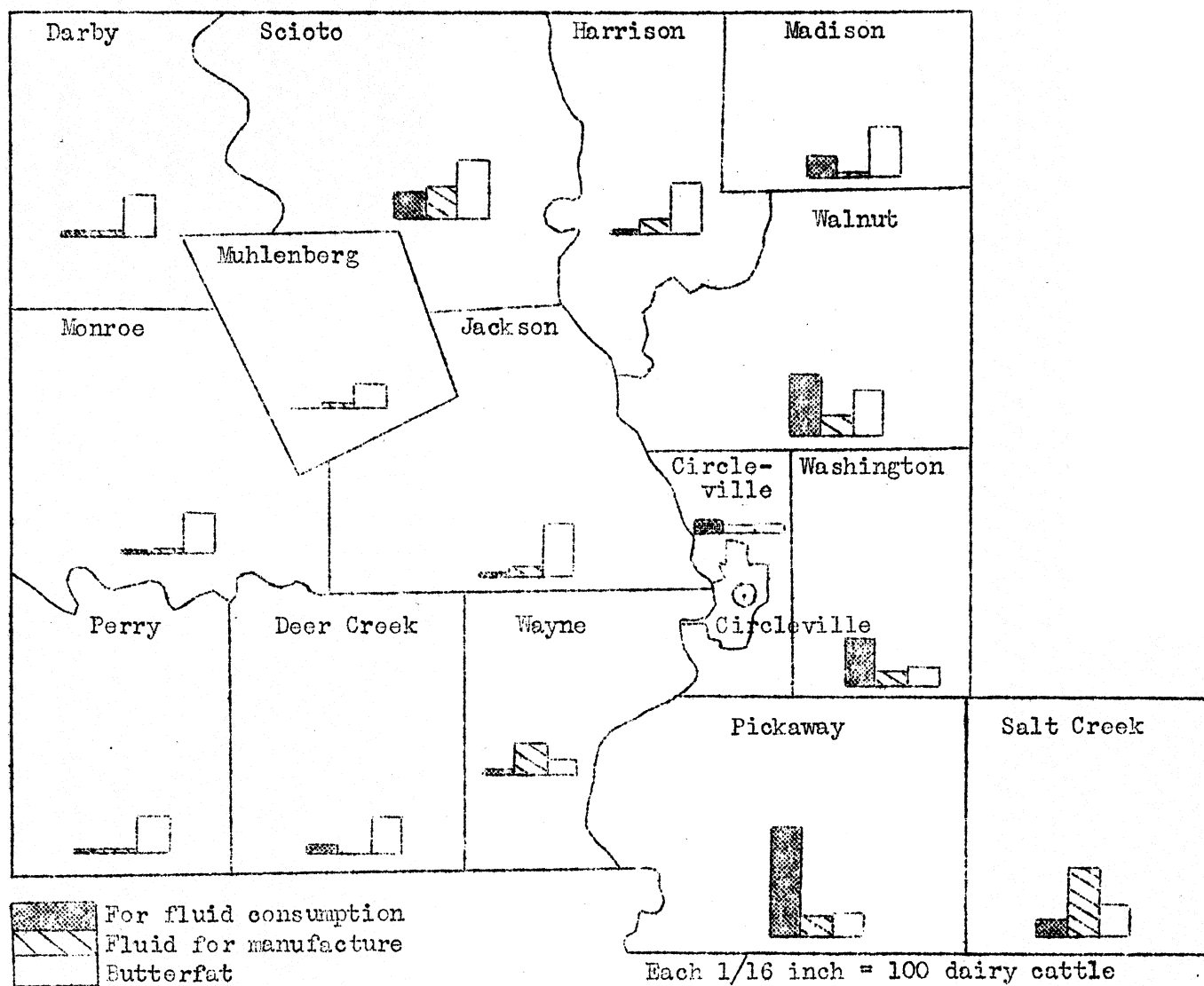


Figure 10. Number of Milk Cattle, by Market Outlet,
Pickaway County, 1939

Union County

This is the only county of the seven in which milk for manufacturing predominates. Of 1720 farms 917 are producing milk for manufacture. This is a reflection of the attractive market outlet provided by the plant of the Nestle's Milk Products Company at Marysville. Three townships represent some concentration of milk for city use. They are Darby, Jerome, and Mill Creek, with a total of 198 farms selling to milk dealers in Columbus.

The county is now operating under the U. S. Public Health Service Milk Ordinance. At the time of the study the dealers were as follows:

Distributors

Hill's Elm Dairy
Smith Dairy Co.
Southard Dairy

Producer-Distributors

R. Fryman L. J. Lake
Daisy Haines E. A. Harris
Snowden Dairy Clegg Dairy
Spain Dairy D. A. Snyder
Guy Prettyman

Floyd Sears
W. T. Ferguson
Bert Atherton
H. Donahue
W. Bowersmith

Table 18 - Number of Dairy Farms and Milk Cattle
and Per cent of Each by Market Outlet, Union County, 1939

| Township | Total number of farms | Total number of milk cattle | <u>For fluid</u> <u>consumption</u> <u>Milk</u> | | <u>Fluid for</u> <u>manufacture</u> <u>Milk</u> | | <u>Butterfat</u> <u>Milk</u> | | <u>Not</u> <u>classified</u> <u>Milk</u> | |
|------------|--------------------------------|--------------------------------------|---|--------|---|--------|---------------------------------|--------|--|--------|
| | | | Farm cattle | | Farm cattle | | Farm cattle | | Farm cattle | |
| | | | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) |
| Allen | 95 | 1215 | 2.1 | 3.0 | 60.0 | 66.3 | 35.8 | 29.1 | 2.1 | 1.6 |
| Claibourne | 196 | 1790 | 6.7 | 11.0 | 56.1 | 61.0 | 35.7 | 27.1 | 1.5 | .9 |
| Darby | 127 | 1839 | 65.4 | 76.4 | 4.7 | 3.3 | 29.1 | 19.8 | .8 | .5 |
| Dover | 113 | 1468 | 11.5 | 13.2 | 68.2 | 73.5 | 9.7 | 6.1 | 10.6 | 7.2 |
| Jackson | 89 | 707 | - | - | 49.4 | 61.1 | 46.1 | 35.2 | 4.5 | 3.7 |
| Jerome | 140 | 2011 | 51.5 | 63.8 | 31.4 | 24.8 | 10.7 | 7.1 | 6.4 | 4.3 |
| Leesburg | 109 | 1061 | 13.8 | 18.7 | 66.0 | 68.7 | 20.2 | 12.6 | - | - |
| Paris | 143 | 1881 | 23.8 | 28.0 | 58.0 | 56.3 | 9.1 | 8.1 | 9.1 | 7.6 |
| Liberty | 157 | 1739 | 5.1 | 3.5 | 61.2 | 67.5 | 29.9 | 25.0 | 3.8 | 4.0 |
| Millcreek | 91 | 1241 | 48.3 | 57.4 | 35.2 | 29.9 | 14.3 | 11.0 | 2.2 | 1.7 |
| Taylor | 123 | 1337 | 28.4 | 33.8 | 44.7 | 44.8 | 16.3 | 13.6 | 10.6 | 7.8 |
| Union | 110 | 1493 | 10.0 | 11.2 | 50.0 | 57.1 | 39.1 | 31.4 | .9 | .3 |
| Washington | 108 | 1398 | 4.7 | 2.5 | 81.5 | 88.1 | 12.9 | 9.2 | .9 | .2 |
| York | 130 | 1594 | 2.3 | 2.4 | 75.4 | 81.8 | 20.0 | 15.0 | 2.3 | .8 |
| County | 1731 | 20774 | 19.5 | 25.6 | 53.0 | 54.3 | 23.5 | 17.1 | 4.0 | 3.0 |

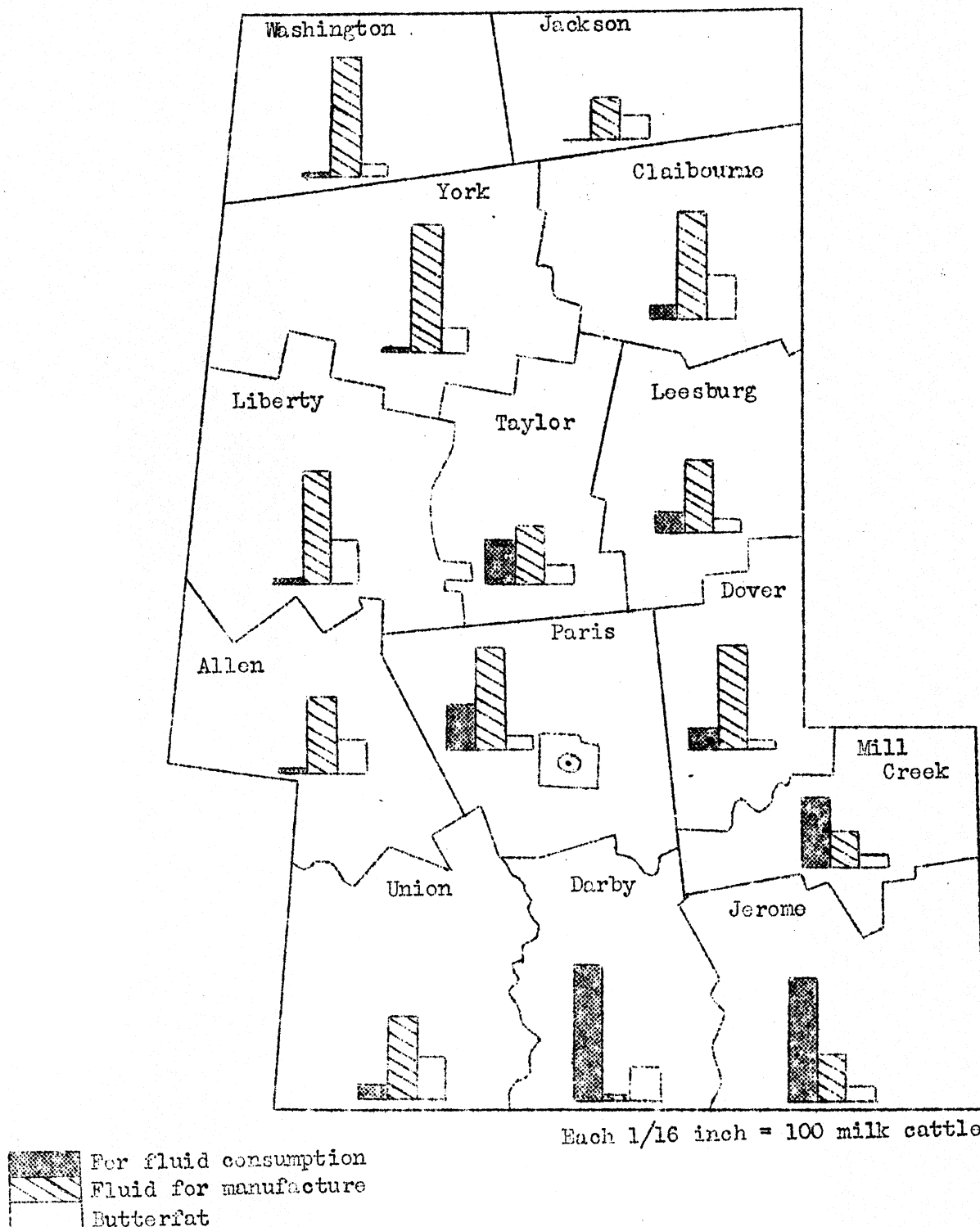


Figure 11. Number of Milk Cattle, by Market Outlet,
Union County, 1939

FARM SALES OF OHIO MILK THROUGH DIFFERENT OUTLETS

I. Columbus Area: Delaware, Fairfield, Franklin, Licking,
Madison, Pickaway and Union Counties

C. G. McBride
and
R. W. Sherman

Department of Rural Economics
Mimeograph Bulletin No. 131 - Part I

Ohio State University
and
Ohio Agricultural Experiment Station

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Columbus, Ohio
August, 1940

Farm Sales of Ohio Milk Through Different Outlets

Part I

Columbus Area: Delaware, Fairfield, Franklin, Licking,
Madison, Pickaway and Union Counties

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FARM SALES OF MILK THROUGH DIFFERENT OUTLETS

I. Columbus Area: Delaware, Fairfield, Franklin, Licking
Madison, Pickaway and Union Counties

by
C. G. McBride and R. W. Sherman

Sources of Data

This study is based upon a survey of all farms with three or more dairy cattle at the time of the last test for tuberculosis conducted by the U. S. Bureau of Animal Industry and the Ohio Department of Agriculture. The records were obtained through the cooperation of these authorities and those in charge of the records in the counties.

A list of herd owners was arranged by townships. Several copies of each list were made and these were mailed to a carefully selected group of key men, well distributed in each township. Each recipient of a list was asked to check the disposition of milk from each farm on which he had this information.

When the checked sheets were returned those for each township were combined and in most cases it was found that a practically complete record had been obtained. In a few townships, the returns were not full enough to constitute a satisfactory record. Personal visits were made into these townships in order to complete the data. A very high percentage of those who received lists cooperated by returning them promptly. Without this generous response on the part of those who were asked to assist, this survey would not have been possible. The cost in time and money of personal visitation to every township would have been prohibitive.

Limitations of the Study

Some difficulties were encountered in obtaining the information from the testing records. Some herds designated as mixed breeds undoubtedly were in whole or part beef cattle, but there was no way to determine the exact numbers. In areas surrounding the cities, there were many farms with 3 or 4 cattle tested. Replies indicated that many of these were kept primarily for home use but in some cases a small amount of milk or butterfat might be sold at certain times. Those who reported often lacked accurate information on such farms.

Some farmers had moved out of the townships between the times of the test and the survey, but this factor was in large measure adjusted by the addition of new names by those reporting. In a very few cases where all attempts to obtain a complete record left too large a percentage of farms unclassified some adjustments were made, based on the records of adjacent townships with approximately the same conditions. Despite the limitations described above, it is believed that the study presents a dependable picture of the disposal of milk from the farms of the area.

Comparison of Study Data with Census and Crop and Livestock Reports

The United States Census and the Federal-State Cooperative Crop and Livestock Reporting Service have a listing "cows and heifers 2 years old and over." This can be considered as a rough classification to include milk cows.

The test records from which this study was made listed all cattle tested. A producer organization in the area had records showing the number of milk cows in the herds of its members. These records were compiled in 1939 and the test records covered 1937 and 1938. It was assumed that not enough time has elapsed between the two to destroy the value of a comparison.

In the two sets of records there were found 947 identical farms. The number of cattle tested was compared with the number of milk cows on these association farms and it was found that for the area there were 65.6 milk cows for each 100 dairy cattle tested. This ratio has been used as a conversion factor to convert "all cattle" of the test records to an estimated number of "milk cows." These computed figures are compared with the Census and Livestock Reports in Table 1.

In general the number of milk cows computed from the study data is smaller than the Census or the Crop and Livestock Service estimate. This is accounted for largely by two factors: first, this study does not include the one and two cow farms; second, it is probable that fewer cows of beef breeds are included in the study than in the crop and livestock estimates. The one exception is Fairfield County where there is very little urban area and where small farms with one or two cows are not numerous. In Madison and Pickaway Counties, beef herds are numerous and the wide difference is evidence that more of the beef cattle were eliminated in the study than from the estimates. The rather wide variation in Franklin County can be accounted for in the large number of 1 and 2 cow farms.

Table 1 - Number of Cows and Heifers, 2 Years Old and Over, 1935 Census, Crop and Livestock Reporting Service, January 1, 1938 Estimates, and Computed Number of Milk Cows in the Study, by Counties

| County | <u>All Cows and Heifers 2 Years old and over</u> | | |
|-------------------|--|--|------------------------------------|
| | 1935 Census | Crop & Livestock Estimates January 1, 1938 | Milk cows in study 1937-1938 |
| Delaware | 17,109 | 16,600 | 15,838 |
| Fairfield | 15,026 | 13,300 | 13,756 |
| Franklin | 18,232 | 17,400 | 14,737 |
| Licking | 24,198 | 22,100 | 21,230 |
| Madison | 11,198 | 8,300 | 6,906 |
| Pickaway | 12,334 | 9,200 | 7,353 |
| Union | 14,022 | 13,900 | 13,628 |
| Total, 7 counties | 112,119 | 100,800 | 93,448 |

In Table 2 a comparison of cows per farm as recorded in the 1935 Census is made with the computed figures of the study. In the Census figures the total number of cows milked anytime during 1934 were divided by the number of farms reporting cows milked for each county. The average per farm of milk cows for the study was computed by applying the conversion factor mentioned above to all cattle tested. It is obvious that the average of the study would be higher because the farms with 1 or 2 milk cows are included in the Census.

Table 2 - Number of Cows Milked per Farm According to 1935 Census,
and Number of Cattle and Number of Cows per Farm of Farms in the Study,*
by County

| County | 1935 Census | All cattle in study | Cows in study |
|------------|----------------|------------------------|------------------|
| Delaware | 6.2 | 12.2 | 8.0 |
| Fairfield | 4.6 | 10.7 | 7.1 |
| Franklin | 5.8 | 12.7 | 8.3 |
| Licking | 5.6 | 12.2 | 8.0 |
| Madison | 5.0 | 12.4 | 8.1 |
| Pickaway | 4.5 | 10.4 | 6.8 |
| Union | 6.0 | 12.0 | 7.9 |
| 7 counties | 5.5 | 11.9 | 7.8 |
| State | 4.8 | -- | -- |

Changes in Market Outlets, 1903 to 1940

One of the first records of a systematic survey of outlets for milk and butterfat from Ohio farms is found in the annual report of the Ohio Dairymen's Association for 1903.¹ Professor J. W. Decker of Ohio State University compiled this directory of butter and cheese factories and milk skimming and shipping stations. The totals for the state were: butter factories, 148; skimming stations, 77; milk shipping stations, 22; American cheese factories, 114; Swiss cheese factories, 92. The report did not include milk dealers who purchased from farmers nor producer-distributors who sold milk at retail.

The seven counties of this area had 20 butterfat factories, 13 skimming stations and 1 milk shipping station. There were no cheese factories. The plants were classified as to type of ownership into cooperative, stock company and private. The butter factories were generally called creameries. Table 3 classifies these creameries as to type and location.

Table 3 - Creameries in Area in 1903*

| Name of plant | Type | County | Township |
|-----------------------------------|---------------|-----------|-----------|
| Sunbury Cooperative Creamery Co. | Cooperative | Delaware | Berkshire |
| Galena Creamery Co. | " | " | " |
| The Delaware Creamery | " | " | " |
| Pickerington Creamery | " | Fairfield | Violet |
| Lithopolis Elgin Butter Co. | Stock company | " | Bloom |
| Twin City Elgin Butter Co. | " | " | Liberty |
| Worthington Creamery Co. | Private | Franklin | Sharon |
| Reynoldsburg Elgin Butter Factory | Cooperative | " | Truro |
| Gahanna Creamery Co. | " | " | Mifflin |
| Westerville Creamery Co. | Private | " | Blendon |

(continued)

¹ Reprint Annual Report Ohio Dairymen's Association, 1903, J. W. Decker.

Table 3 - Creameries in Area in 1903* (continued)

| Name of plant | Type | County | Township |
|-------------------------|-------------|----------|-------------|
| Alexandria Creamery | Private | Licking | St. Albans |
| Summit Creamery Co. | Cooperative | " | Lima |
| Licking County Creamery | Private | " | Newark |
| Outville Creamery Co. | Cooperative | " | Harrison |
| Gratiot Creamery | " | " | Hopewell |
| Vanatta Creamery | Private | " | Newton |
| Crowner Dairy Co. | " | Madison | Jefferson |
| Circleville Creamery | " | Pickaway | Circleville |
| Raymond Creamery | " | Union | Liberty |
| Marysville Creamery | " | " | Paris |

* In addition to the plants listed here there were the following skimming stations: Delaware County, 4 for Sunbury Creamery, 1 for Galena Creamery; Fairfield County, 1 for Licking County Creamery; Franklin County, 2 used in making butterine by the Capital City Dairy, 1 for Reynoldsburg Elgin Factory, 1 at New Albany; Licking County, 2 for Summit Station Creamery, 1 for Licking County Creamery, and 1 for Reynoldsburg Creamery.

In 1931 McBride and Cowden made a survey of sources of market milk and butterfat in Ohio.² The data in this study were obtained from the records of manufacturing and distribution concerns, local boards of health and from the U. S. Census.

Table 4 - Number of Dairy Cows Compared with Total Population in Counties of the Area, 1900 and 1930

| County | 1900 | | | 1930 | | |
|------------|------------|------------------|-------------------------|------------|------------------|-------------------------|
| | Dairy cows | Total population | Cows per 100 population | Dairy cows | Total population | Cows per 100 population |
| Delaware | 9,279 | 26,401 | 35 | 15,219 | 26,016 | 58 |
| Fairfield | 9,103 | 34,259 | 27 | 12,281 | 44,010 | 28 |
| Franklin | 13,660 | 164,460 | 8 | 16,095 | 361,055 | 4 |
| Licking | 12,116 | 47,070 | 26 | 19,820 | 59,962 | 33 |
| Madison | 5,369 | 20,590 | 26 | 7,285 | 20,253 | 37 |
| Pickaway | 6,681 | 27,016 | 25 | 8,232 | 27,238 | 30 |
| Union | 7,887 | 22,342 | 35 | 12,444 | 19,192 | 65 |
| 7 counties | 64,095 | 342,138 | 19 | 91,376 | 557,726 | 16 |

Some significant changes both in the number of cows and in population of the counties of the area, took place between 1900 and 1930 as shown in Table 4, compiled from the United States Census. These were important factors in the shift of market outlets between 1903 and 1931.

² Ohio Agricultural Experiment Station Bulletin No. 523, Sources of Market Milk and Butterfat in Ohio, C. G. McBride and T. K. Cowden, 1933.

There was little change in total population of four of the counties - Delaware, Madison, Pickaway and Union. In the other three, Fairfield, Franklin and Licking, there was a marked increase due to growth of the cities Lancaster, Columbus and Newark. These three cities had a total of 152,708 population in 1900 and 339,876 in 1930. The total milk purchasing population of the 7 counties in 1930 was estimated to be 471,089.

This pronounced increase of milk consuming population had a marked effect in changing market outlets. By 1931 the small butter factories and their skimming stations had disappeared. There were five churning points left in the area engaged in centralized butter manufacture, Columbus, Circleville, London, Newark and Pickerington. Milk manufacturing plants were operating in Columbus, Westerville, Marysville, and Sunbury.

A picture of sales of whole milk and butterfat by counties for 1929 as disclosed by the 1930 Census is found in Table 5.

Table 5 - Sales of Whole Milk and Butterfat and Number of Farms Reporting Each, for 1929

| County | Farms reporting whole milk sold (number) | Annual sales | | Annual sales of butterfat per farm (pounds) |
|------------|---|---|---|--|
| | | of whole milk per farm reporting (gallons) | Farms reporting cream sold as butterfat (number) | |
| Delaware | 1,579 | 3,511 | 419 | 637 |
| Fairfield | 415 | 3,113 | 1,830 | 562 |
| Franklin | 1,113 | 4,922 | 524 | 828 |
| Licking | 1,281 | 3,943 | 1,324 | 611 |
| Madison | 475 | 2,743 | 603 | 488 |
| Pickaway | 437 | 2,346 | 945 | 407 |
| Union | 1,380 | 2,777 | 607 | 563 |
| 7 counties | 6,680 | | 6,252 | |

Source: Ohio Agricultural Experiment Station Bulletin No. 523, p.30.

In 1929 Delaware, Union, Licking and Franklin Counties supplied the bulk of the sales of whole milk. Fairfield was heaviest in sales of butterfat and Licking was second. The eastern and southern parts of Licking County ran heaviest in sale of butterfat.

Status of Manufacturing Outlets at Time of Survey

To complete the record of changes in manufacturing outlets covered in the previous surveys it is significant to list at this point the plants operating in the area at the time of the 1940 survey. They are given in Table 6. The most pronounced change from 1931 to 1940 is in the increase in importance of plants manufacturing whole milk. The operations of Nestle's Milk Products Company at Marysville were expanded; the area covered and volume handled by the M & R Dietetic Laboratory had increased; and the Carnation Company at Coshocton, in addition to the milk going into the Rushville receiving station, was drawing much milk direct from Licking County.

Table 6 - Milk Products and Butter Manufacturing Plants in Area, 1940

| Name of Concern | Town | County | Product |
|---|--------------|-----------|-----------------------------------|
| Nestles Milk Prod. Co. (Receiving station) | Sunbury | Delaware | Evaporated milk |
| Westerville Creamery Co. | Westerville | " | Milk products |
| Pickerington Creamery (cheese division) | Bremen | Fairfield | American cheese |
| Pickerington Creamery | Pickerington | " | Butter and powdered buttermilk |
| Carnation Company (Receiving station) | Rushville | " | Evaporated milk |
| M & R Dietetic Laboratories, Inc. | Columbus | Franklin | Similac and powdered milk |
| Fairmont Creamery Co. | " | " | Butter and milk products |
| Beatrice Creamery | " | " | Butter |
| Moore & Ross, Inc. | " | " | Butter and condensed milk |
| The Davis Co. | Newark | Licking | Butter and condensed milk |
| London Creamery Co. | London | Madison | Butter |
| Pickaway Dairy Cooperative Ass'n. | Circleville | Pickaway | Butter and dry milk |
| Nestles Milk Products Co. | Marysville | Union | Evaporated milk |

Transportation Facilities

This area has now reached a stage of improved highway mileage that provides all year round access to markets from a great majority of the farms. The only exception is Licking County, which has slightly over 800 miles of earth roads out of a total of 1427 miles.

It is obvious from this that a much greater supply of milk is located on good roads within easy trucking distance of the consuming centers of the area than is needed for use as fresh milk and cream. It has been estimated that in the period of lowest production less than 30 per cent of the milk produced within the area and accessible for daily movement by truck is needed for fresh milk and cream consumption.

Status of Sanitary Controls by Health Boards

Regular farm inspection by the cities of Columbus, Newark and Delaware has been in effect for several years. Other than this, there had been little in the way of sanitary controls until the adoption of the U.S. Standard Milk Ordinance in four of the seven counties, beginning with Delaware County in 1936.

The U. S. Public Health Service Milk Ordinance is suggested for adoption by states, municipalities, counties or health districts, subject to the approval of the local legal authorities. The U. S. Public Health Service functions in an advisory capacity only. It has no power of enforcement.

When the ordinance is adopted it is the usual procedure to have a probationary period in which dealers and producers are given an opportunity to make the necessary changes in plant and equipment to meet the requirements. Milk under the ordinance is graded and each local health district determines what grades may be sold in that district. Usually the sale is confined to Grade A raw, and Grade A and B pasteurized. The grading is based on a score card system covering the building, equipment and bacterial content of the milk. The probationary period is 12 months and at the end of this period the grades to be sold are announced and all parties must comply. Grades have been announced in Delaware and Madison Counties. They will soon be announced in Union County. Fairfield County has adopted the ordinance and the city of Lancaster will cooperate to make it a joint operation as it is in the other counties. It is under consideration in Pickaway County.

The City of Columbus has the most extensive program of sanitary inspection and control. There are approximately 2,400 farms on the active inspection lists. Not all of these farms are selling milk to Columbus distributors for fresh milk and cream use at any one time.

The sale of milk from farms to consumers who come to the farm and bring their own containers with them, is common practice in the area. In counties that have no milk inspection under county health board supervision there are no sanitary controls over this trade. The city has no responsibility for inspection unless the milk is sold within the corporation limits. In fact, there are some instances where farmers began selling retail at the farm after they had been shut off by the city inspectors because of failure to meet the minimum sanitary requirements. Some of these farmers selling only at the farm have been classified by those who reported as producer-distributors but the sort has not been entirely accurate because many of them also sell into some other market outlet, and were so classified.

Cooperative Marketing by Producers

Cooperative associations incorporated to handle both milk and butterfat cover all the counties of the area. The Central Ohio Cooperative Milk Producers Association has membership in all the counties of the area. Producers supplying milk to Newark have a bargaining association, the Licking County Cooperative Milk Producers Association; and those supplying Lancaster are incorporated as the Lancaster County Cooperative Milk Producers Association. Both of these associations are primarily city milk supply bargaining associations. The Pickaway Cooperative Dairy is a cooperative manufacturing plant engaged in making butter and some other milk products. Its members and patrons are confined almost entirely to Pickaway County.

The Central Ohio Cooperative Milk Producers Association is incorporated to act as the sales agent for or take title to the milk or butterfat of producers, regardless of whether the outlet is a city distributing plant, a milk manufacturing plant or a butter factory. Membership at the time of the study was in a somewhat uncertain status. The Association came into existence as a consolidation of the membership of the Scioto Valley Milk Producers Association and that of the Columbus Milk Producers Association. Members of the two old associations were signed on a new contract, but to cover the period of organization the new association was designated as the sales agent for the two that were

being liquidated. No elections of officers were held in either old association in 1939, but the new contracts had not yet been put into force in July, 1940. The membership at the time of the survey consisted almost wholly of producers whose milk went to Columbus distributors. There were a few whose milk went to manufacturing plants and a few sour cream shippers.

Type of Farming

This area is on the eastern edge of the corn belt. That portion west of Columbus is better suited to corn production than that which lies east. The seven counties had a corn yield per acre in 1938 of 46 bushels, when the state average was 44 bushels. In wheat production the average yield was approximately one bushel under the average for the state. In tame hay, it was slightly above the state average. General farming with strong emphasis on livestock is the prevailing type.

Table 7 shows the importance of dairying as source of cash farm income in the area. Income from the sale of dairy products, cull dairy cows and veal calves represented 25 per cent of the cash farm income in the seven-county area for the period 1934-38. For the state as a whole, dairy income represented 28 per cent of the total cash farm income for the same period. In Delaware, Franklin, Licking and Union Counties the percentage of income received from dairying was above, while in Fairfield, Madison and Pickaway Counties, it was below state average. The percentages in these three counties was enough below the state average to bring the percentage for the area below that for the state. The influence of the cities of Columbus and Newark as markets for fresh milk and cream is reflected in the rank of the seven counties as to dairy income.

Table 7 - Important Sources of Cash Farm Income,
Percentage of Total Cash Farm Income Contributed by, and Rank of Each,
7 Central Ohio Counties, 1934-38 average

| County | Total cash farm income | Rank of sources of income and their relative importance | | | | | | | |
|------------|---------------------------|---|------------------|--------|------------------|---------|------------------|---------|------------------|
| | | First | Pct. of Total | Second | Pct. of Total | Third | Pct. of Total | Fourth | Pct. of Total |
| Delaware | \$3,414,000 | DAIRY | 43 | Hogs | 15 | Poultry | 12 | Sheep | 8 |
| Fairfield | 4,495,000 | Hogs | 30 | DAIRY | 20 | Poultry | 11 | Wheat | 10 |
| Franklin | 5,273,000 | DAIRY | 33 | Hogs | 20 | Poultry | 8 | Wheat | 8 |
| Licking | 4,969,000 | DAIRY | 36 | Hogs | 16 | Poultry | 14 | Sheep | 9 |
| Madison | 4,547,000 | Hogs | 41 | DAIRY | 13 | Wheat | 12 | Corn | 9 |
| Pickaway | 5,392,000 | Hogs | 31 | Wheat | 15 | Corn | 11 | DAIRY | 11 |
| Union | 3,723,000 | DAIRY | 30 | Hogs | 25 | Poultry | 9 | Wheat | 8 |
| 7 counties | 31,813,000 | Hogs | 26 | DAIRY | 25 | Wheat | 10 | Poultry | 9 |

Summary of Study by Counties and Townships

The material included in this section is a compilation of the information furnished by those who assisted in the mail survey supplemented by some additional data obtained in personal visits to the counties. Tables 8 to 11 and Figures 1 to 4 summarize the material for the district by counties. A discussion of each county with township analyses follows.

Table 8 summarizes the distribution of farms and cattle among the market outlets and Table 9 shows how these outlets rank as to number of cows per farm. In Table 10 the farms are distributed on a percentage basis and in Table 11 the cattle are so distributed among market outlets.

Milk sold by producer-distributors belongs in the same outlet classification as milk sold to dealers for fresh fluid consumption. In the county tables they are combined. To find the number of farms and cattle involved in supplying consumers with fresh milk it is necessary in all instances to combine the "Producer-Distributor" figures with those of "Fluid to Distributor." The total number of farms in this classification is 3744, or 31.2 per cent. These 3744 farms, however, have 42.2 per cent of the milk cattle because the larger dairy farms seek the city market outlets. The farms selling butterfat rank lowest in average number of cows per farm.

Among the counties the variation in per cent of dairy farms selling milk for fluid consumption is from 13.2 per cent for Fairfield County to 52.1 per cent for Franklin County. In the case of number of milk cows on farms selling milk for fluid consumption Fairfield County was low with 19.9 per cent and Franklin was high with 64.2 per cent. Pickaway County is highest in both per cent of farms selling butterfat and in number of milk cattle on these farms with 60.7 and 45.4 per cent respectively. Franklin County farms had only a little over 5 per cent of their milk production going through fluid milk manufacturing channels.

The figures 1 to 4, show the concentration of cows in the district. Figure 1 includes all milk cows in herds with 3 or more dairy cattle. This map shows a gradual decrease in density of cow population as distance from the city of Columbus increases with the exception of Union County where fluid manufacture has developed into an important outlet. Figure 2 shows plainly the influence of the two major markets - Columbus and Newark - on the distribution of milk cattle kept for sale of milk for fluid consumption.

The most important outlet for milk for manufacturing purposes is at Marysville where milk is drawn heavily from all of Union County and also from Delaware and part of Licking Counties. There is also an area in eastern Fairfield County where a high percentage of the milk is sold through fluid manufacturing channels. This is shown in Figure 3.

Sale of butterfat is fairly well distributed over all seven counties with the heaviest sales in Licking and Fairfield Counties.

Table 8 - Number of Dairy Farms and Number of Milk Cattle,
by Market Outlet, 7 Central Ohio Counties, 1939

| County | Producer Distributor | | Fluid to distributor | | Fluid for manufacture | | Butterfat | | Not classified | | Total | |
|--------------------|-------------------------|--------|-------------------------|--------|--------------------------|--------|-----------|--------|-------------------|--------|--------|---------|
| | Farms | Cattle | Farms | Cattle | Farms | Cattle | Farms | Cattle | Farms | Cattle | Farms | Cattle |
| Delaware | 26 | 437 | 897 | 13,129 | 552 | 6,357 | 463 | 3,697 | 46 | 523 | 1,984 | 24,143 |
| Fairfield | 35 | 556 | 262 | 4,167 | 575 | 6,623 | 972 | 8,692 | 107 | 931 | 1,951 | 20,969 |
| Franklin | 17 | 546 | 920 | 14,412 | 100 | 1,223 | 596 | 5,296 | 134 | 988 | 1,767 | 22,465 |
| Licking | 78 | 1,206 | 804 | 13,687 | 556 | 6,408 | 1,137 | 10,341 | 70 | 721 | 2,645 | 32,363 |
| Madison | 8 | 253 | 160 | 2,860 | 191 | 2,832 | 447 | 4,169 | 43 | 414 | 849 | 10,528 |
| Pickaway | 25 | 480 | 174 | 3,019 | 183 | 2,265 | 652 | 5,092 | 41 | 353 | 1,075 | 11,209 |
| Union | 13 | 175 | 325 | 4,132 | 917 | 11,285 | 406 | 3,560 | 70 | 622 | 1,731 | 20,774 |
| District totals | 202 | 3,653 | 3,542 | 56,406 | 3,074 | 36,993 | 4,673 | 40,847 | 511 | 4,552 | 12,002 | 142,451 |

Table 9 - Number of Milk Cattle per Farm by Market Outlet,
7 Central Ohio Counties, 1939

| County | Producer- Distributor | Fluid to distributor | Fluid for manufacture | Butterfat | Not classified | Total |
|------------|--------------------------|-------------------------|--------------------------|-----------|-------------------|-------|
| Delaware | 16.8 | 14.6 | 11.5 | 8.0 | 11.4 | 12.2 |
| Fairfield | 15.9 | 15.9 | 11.5 | 8.9 | 8.7 | 10.7 |
| Franklin | 32.0 | 15.7 | 12.2 | 8.9 | 7.4 | 12.7 |
| Licking | 15.5 | 17.0 | 11.5 | 9.2 | 10.3 | 12.2 |
| Madison | 28.2 | 17.9 | 14.8 | 9.3 | 9.6 | 12.4 |
| Pickaway | 19.2 | 17.4 | 12.4 | 7.8 | 8.6 | 10.4 |
| Union | 14.6 | 15.8 | 11.2 | 8.8 | 8.9 | 12.0 |
| 7 counties | 18.1 | 15.9 | 12.0 | 8.8 | 8.9 | 11.9 |

Table 10 - Number and Per cent of Dairy Farms by Market Outlet,
7 Central Ohio Counties, 1939

| County | Producer Distributor | | Fluid to distributor | | Fluid for manufacture | | Butterfat | | Not classified | | Total | |
|------------|----------------------|--------|----------------------|--------|-----------------------|--------|-----------|--------|----------------|--------|--------|--------|
| | (no.) | (pct.) | (no.) | (pct.) | (no.) | (pct.) | (no.) | (pct.) | (no.) | (pct.) | (no.) | (pct.) |
| Delaware | 26 | 1.3 | 897 | 45.3 | 552 | 27.8 | 463 | 23.3 | 46 | 2.3 | 1,984 | 100.0 |
| Fairfield | 35 | 1.8 | 262 | 13.4 | 575 | 29.5 | 972 | 49.8 | 107 | 5.5 | 1,951 | 100.0 |
| Franklin | 17 | 1.0 | 920 | 52.1 | 100 | 5.7 | 596 | 33.7 | 134 | 7.5 | 1,767 | 100.0 |
| Licking | 78 | 2.9 | 804 | 30.5 | 556 | 21.0 | 1,137 | 43.0 | 70 | 2.6 | 2,645 | 100.0 |
| Madison | 8 | .9 | 160 | 18.8 | 191 | 22.5 | 447 | 52.7 | 43 | 5.1 | 849 | 100.0 |
| Pickaway | 25 | 2.3 | 174 | 16.2 | 183 | 17.0 | 652 | 60.7 | 41 | 3.8 | 1,075 | 100.0 |
| Union | 13 | .7 | 325 | 18.8 | 917 | 53.0 | 406 | 23.5 | 70 | 4.0 | 1,731 | 100.0 |
| 7 counties | 202 | 1.7 | 3,542 | 29.5 | 3,074 | 25.6 | 4,673 | 38.9 | 511 | 4.3 | 12,002 | 100.0 |

Table 11 - Number and Per cent of Milk Cattle by Market Outlet,
7 Central Ohio Counties, 1939

| County | Producer-Distributor | | Fluid to distributor | | Fluid for manufacture | | Butterfat | | Not classified | | Total | |
|------------|----------------------|--------|----------------------|--------|-----------------------|--------|-----------|--------|----------------|--------|---------|--------|
| | (no.) | (pct.) | (no.) | (pct.) | (no.) | (pct.) | (no.) | (pct.) | (no.) | (pct.) | (no.) | (pct.) |
| Delaware | 437 | 1.8 | 13,129 | 54.4 | 6,357 | 26.3 | 3,697 | 15.3 | 523 | 2.2 | 23,143 | 100.0 |
| Fairfield | 556 | 2.7 | 4,167 | 19.9 | 6,623 | 31.6 | 8,692 | 41.4 | 931 | 4.4 | 20,969 | 100.0 |
| Franklin | 546 | 2.4 | 14,412 | 64.2 | 1,223 | 5.4 | 5,296 | 23.6 | 988 | 4.4 | 22,465 | 100.0 |
| Licking | 1,206 | 3.7 | 13,687 | 42.3 | 6,408 | 19.8 | 10,341 | 32.0 | 721 | 2.2 | 32,363 | 100.0 |
| Madison | 253 | 2.4 | 2,360 | 27.2 | 2,832 | 26.9 | 4,169 | 39.6 | 414 | 3.9 | 10,528 | 100.0 |
| Pickaway | 480 | 4.3 | 3,019 | 26.9 | 2,265 | 20.2 | 5,092 | 45.4 | 353 | 3.2 | 11,209 | 100.0 |
| Union | 175 | .9 | 5,132 | 24.7 | 11,285 | 54.3 | 3,560 | 17.1 | 622 | 3.0 | 20,774 | 100.0 |
| 7 counties | 3,653 | 2.6 | 56,406 | 39.6 | 36,993 | 26.0 | 40,847 | 28.6 | 4,552 | 3.2 | 142,451 | 100.0 |

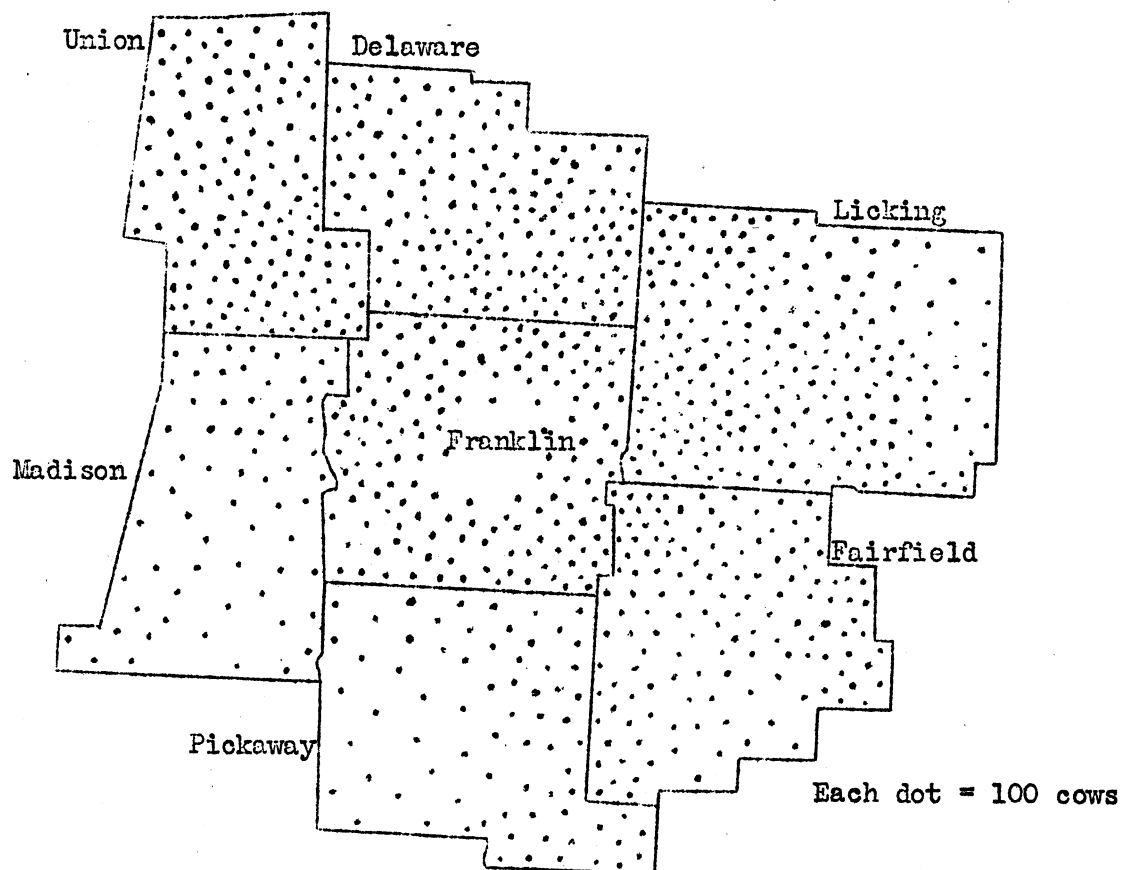


Figure 1. Cows Kept for Sale of Dairy Products

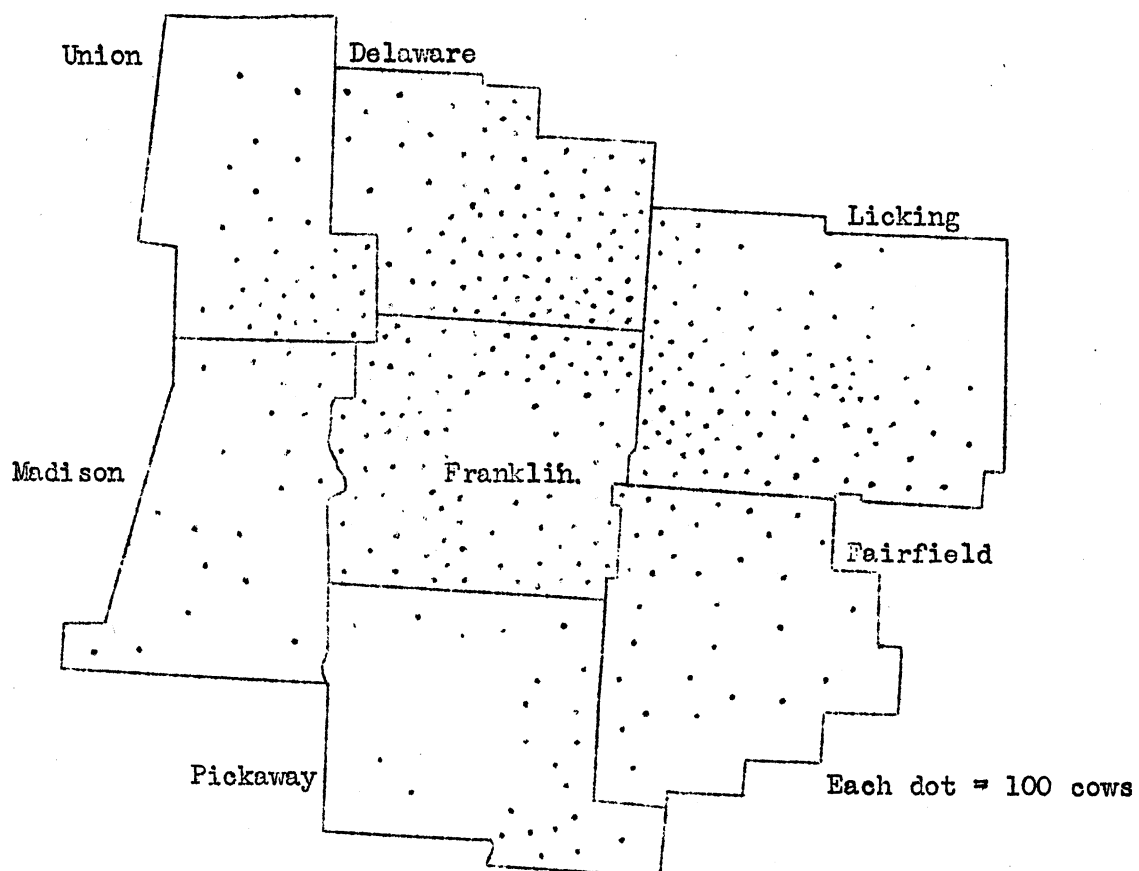


Figure 2. Cows Kept for Sale of Milk for Fluid Consumption

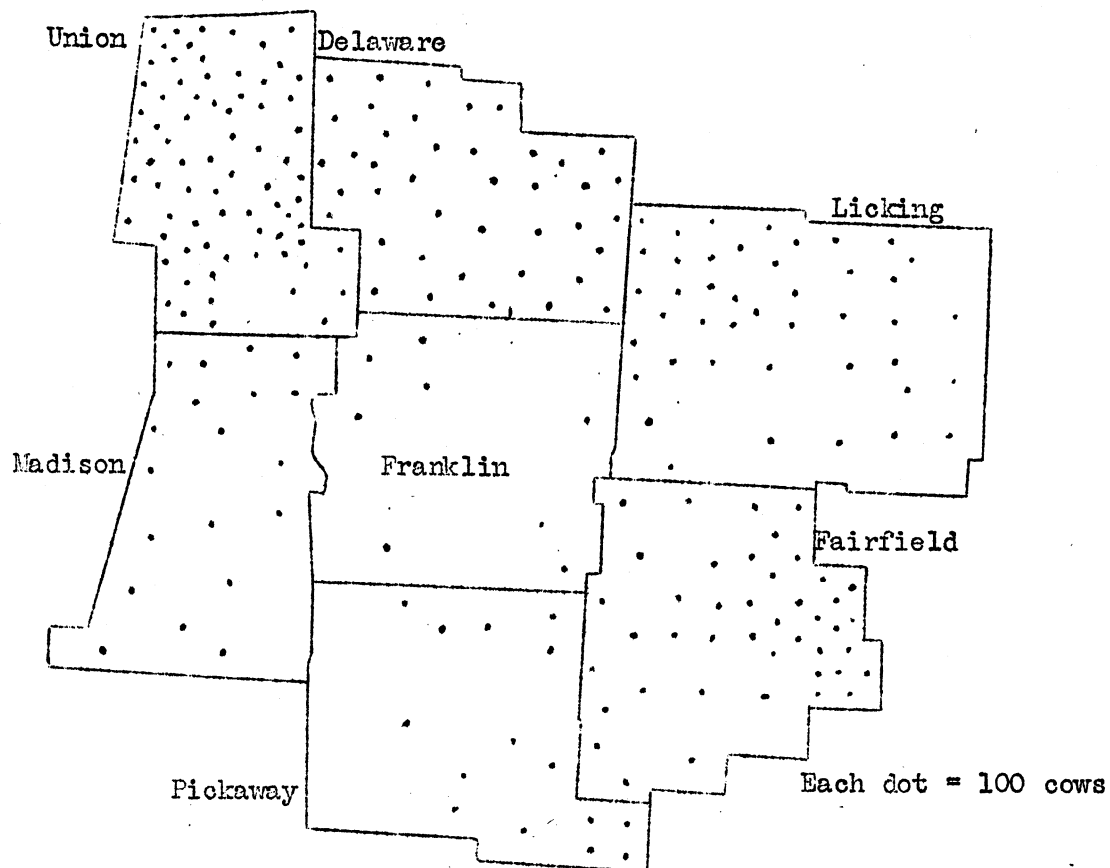


Figure 3. Cows Kept for Sale of Fluid Milk for Manufacture

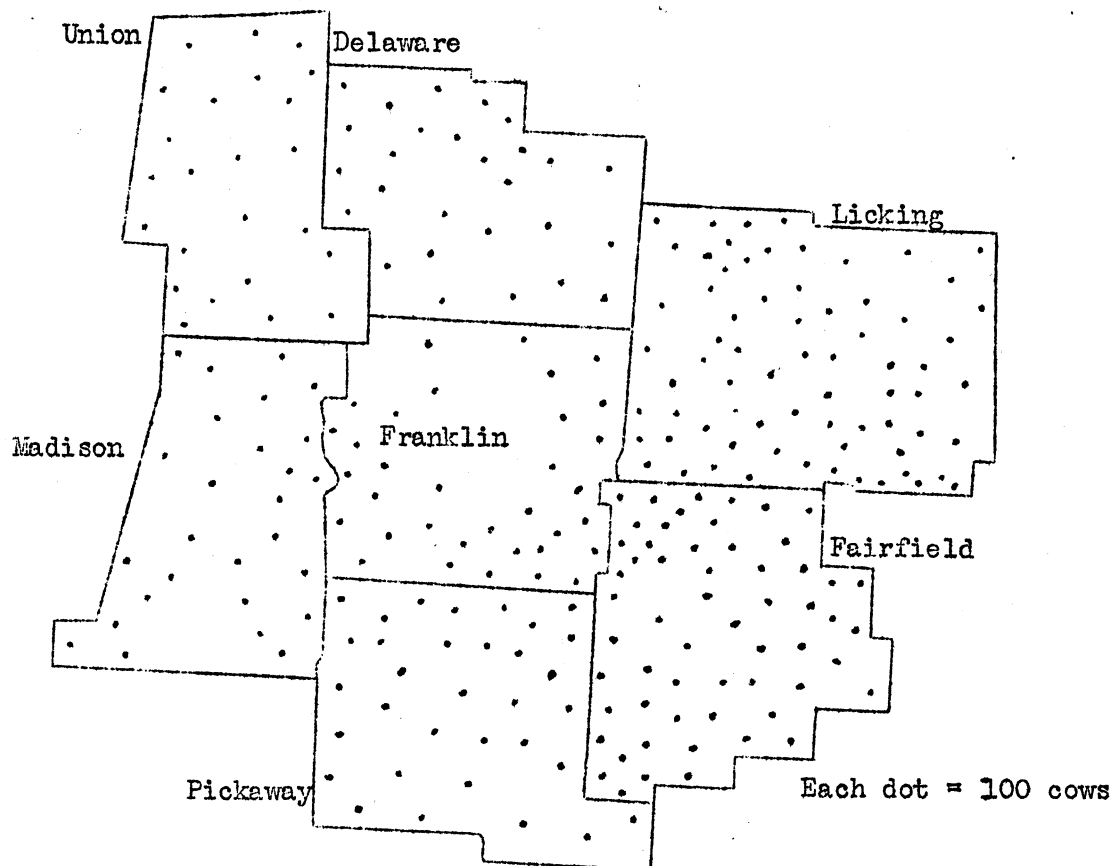


Figure 4. Cows Kept for Sale of Butterfat

Delaware County

This county has long been an important source of supply for Columbus milk dealers. The county is well adapted to dairy farming. There are no large cities in it and it therefore does not have the suburban influence upon the type of farming so evident in Franklin County. Table 12 shows that there were 7 townships in the county with more than 50 per cent of the dairy farms in the city milk classification at the time of the survey. They were Berkshire, Berlin, Genoa, Harlem, Liberty, Orange and Trenton. The farms of these 7 townships averaged two more cows per farm than all dairy farms in the county.

Two townships, Radnor and Scioto, had more farms selling to manufacturing plants than to any other outlet. Most of this milk went to the plant of Nestles Milk Products Company at Marysville in Union County. There are two plants located in Delaware County that buy milk for manufacturing, the Westerville Creamery and a receiving station of the Nestles Company at Sunbury.

The U. S. Public Health Service Milk Ordinance was adopted for the county in 1936. In 1938 the City of Delaware joined with the county and at the time of this survey the operation was on a joint basis. All dealers were required to operate under permit. Raw milk dealers were required to test for tuberculosis and Bangs disease and were strongly urged to test for mastitis. Producers selling sweet cream to consumers were required to have a permit, but the same rigid barn requirements as for raw milk were not imposed.

Mr. Willis R. Aukland, District Sanitarian reported that since the milk sanitation program has been established there has been a growing demand for pasteurized milk on the part of purchasers in the rural areas. He estimated that 96 to 98 per cent of the milk sold in the city of Delaware and the incorporated villages of the county is pasteurized. Fresh milk consumption in the city and villages has shown a marked increase. The early and efficient work of the staff of the Board of Health in Delaware County was responsible to a large measure for the introduction of the U. S. Public Health Service Ordinance in some of the other counties of the area.

The dealers operating under permit to sell milk at the time of the survey were as follows:

| <u>Distributors</u> | <u>Producer-Distributors</u> | <u>Distributing Broker</u> |
|---------------------------|------------------------------|----------------------------|
| Delaware Milk Co. | Fairland Farm Dairy | Elmer Mackan |
| Case Dairy Products, Inc. | W. B. Carson | |
| Harry Irwin | O. O. Koepfel | |
| Finley Jones | Barton Jersey Farm | |
| Parrotts Dairy | Esther Schultz Dairy | |
| Westerville Creamery | Fred White | |
| | John Sticklin | |
| | Tippecanoe Spring Dairy | |
| | Indian Springs Dairy | |

Table 12 - Number of Dairy Farms and Milk Cattle,
and Per cent of Each by Market Outlet, Delaware County, 1939

| Township | Total number of farms | Total number of milk cattle | For fluid consumption | | Fluid for manufacture | | Butterfat | | Not classified | |
|-----------|--------------------------------|--------------------------------------|--------------------------|-------------|--------------------------|-------------|-------------|-------------|-------------------|-------------|
| | | | Milk | | Milk | | Milk | | Milk | |
| | | | Farm cattle | Farm cattle | Farm cattle | Farm cattle | Farm cattle | Farm cattle | Farm cattle | Farm cattle |
| | | | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) |
| Berkshire | 114 | 1432 | 73.7 | 79.8 | 8.8 | 7.1 | 12.3 | 8.3 | 5.2 | 4.8 |
| Berlin | 144 | 1751 | 73.6 | 80.0 | 11.1 | 11.9 | 14.6 | 9.8 | .7 | .3 |
| Brown | 93 | 1205 | 35.5 | 48.0 | 25.8 | 24.1 | 31.2 | 20.5 | 7.5 | 7.4 |
| Concord | 97 | 1150 | 49.5 | 51.8 | 32.0 | 30.4 | 15.4 | 15.2 | 3.1 | 2.6 |
| Delaware | 93 | 976 | 48.4 | 53.6 | 28.0 | 24.9 | 16.1 | 12.0 | 7.5 | 9.5 |
| Genoa | 151 | 1838 | 66.9 | 73.5 | 12.6 | 12.9 | 20.5 | 13.6 | -- | -- |
| Harlem | 122 | 1671 | 61.4 | 71.3 | 23.8 | 17.7 | 11.5 | 8.9 | 3.3 | 2.1 |
| Kingston | 101 | 1409 | 38.6 | 55.6 | 36.6 | 29.1 | 24.8 | 15.3 | -- | -- |
| Liberty | 149 | 1817 | 52.3 | 67.9 | 17.5 | 16.3 | 28.2 | 15.1 | 2.0 | .7 |
| Marlboro | 47 | 380 | 8.5 | 12.6 | 38.3 | 48.7 | 53.2 | 38.7 | -- | -- |
| Orange | 105 | 1500 | 59.0 | 74.9 | 32.4 | 22.1 | 8.6 | 3.0 | -- | -- |
| Oxford | 85 | 876 | 21.2 | 34.6 | 30.6 | 33.0 | 44.7 | 28.0 | 3.5 | 4.4 |
| Porter | 105 | 1270 | 38.1 | 43.9 | 41.0 | 38.3 | 18.1 | 13.8 | 2.8 | 4.0 |
| Radnor | 108 | 1307 | 15.8 | 22.2 | 47.2 | 51.9 | 37.0 | 25.9 | -- | -- |
| Scioto | 137 | 1415 | 12.4 | 13.4 | 46.0 | 56.3 | 40.9 | 28.8 | .7 | 1.5 |
| Thompson | 97 | 1067 | 39.2 | 42.7 | 25.8 | 29.7 | 29.9 | 23.4 | 5.1 | 4.2 |
| Trenton | 138 | 2024 | 58.7 | 68.9 | 31.1 | 24.3 | 8.0 | 5.1 | 2.2 | 1.7 |
| Troy | 98 | 1055 | 37.7 | 41.5 | 31.7 | 33.2 | 30.6 | 25.3 | -- | -- |
| County | 1984 | 24143 | 46.6 | 56.2 | 27.8 | 26.3 | 23.3 | 15.3 | 2.3 | 2.2 |

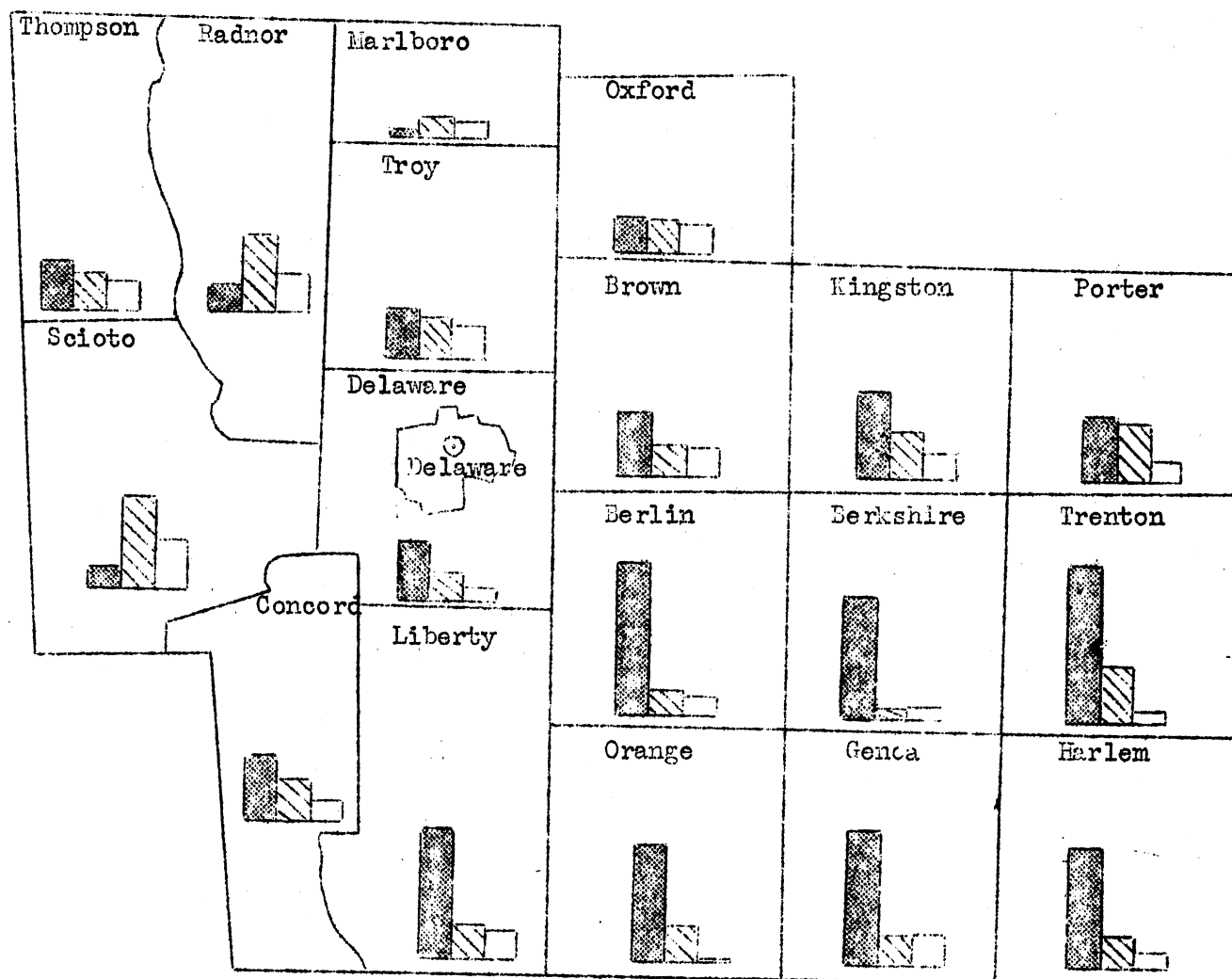


Figure 5. Number of Milk Cattle, by Market Outlet,
Delaware County, 1939

Fairfield County

Most of the milk production of the county is marketed as butterfat. There are 7 townships Amanda, Berne, Clear Creek, Hocking, Liberty, Madison and Violet, in which more than 50 per cent of the farms listed are selling butterfat. There is no township in the county that has as many farms selling to city dealers as are selling butterfat.

The county has a market for manufacturing milk in the Bremen Cheese Factory making American cheese. Some milk for manufacture also moves into Columbus.

The county and the town of Lancaster were in the process of going under the U. S. Public Health Service Milk Ordinance when the survey was made. The Ordinance was passed by the county in June and was before the Council in Lancaster in July. It was expected that all producers would pay a permit fee of \$1.00. No list of dealers was available at the time of the survey.

Table 13 - Number of Dairy Farms and Milk Cattle,
and Per cent of Each by Market Outlet, Fairfield County, 1939

| Township | Total number of farms | Total number of milk cattle | For fluid consumption | | Fluid for manufacture | | Butterfat | | Not classified | |
|-------------|--------------------------------|--------------------------------------|--------------------------|--------|--------------------------|--------|-----------|--------|-------------------|--------|
| | | | Milk | | Milk | | Milk | | Milk | |
| | | | Farm | cattle | Farm | cattle | Farm | cattle | Farm | cattle |
| | | | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) |
| Amanda | 143 | 1486 | 17.5 | 22.2 | 25.9 | 29.1 | 52.4 | 45.2 | 4.2 | 3.5 |
| Berne | 112 | 1028 | 9.8 | 21.0 | 8.9 | 11.1 | 81.3 | 67.9 | - | - |
| Bloom | 131 | 1305 | 15.3 | 24.7 | 23.7 | 24.6 | 46.5 | 37.2 | 14.5 | 13.5 |
| Clear Creek | 153 | 1395 | 8.5 | 10.6 | 25.5 | 26.7 | 66.0 | 62.7 | - | - |
| Greenfield | 153 | 1582 | 15.1 | 22.1 | 37.2 | 39.5 | 38.6 | 29.4 | 9.1 | 9.0 |
| Hocking | 125 | 1205 | 22.4 | 36.4 | 13.6 | 16.9 | 62.4 | 45.9 | 1.6 | 3.8 |
| Liberty | 229 | 2332 | 19.6 | 31.8 | 14.8 | 14.4 | 54.2 | 44.4 | 11.4 | 9.4 |
| Madison | 57 | 523 | 10.5 | 7.8 | 21.1 | 20.3 | 61.4 | 65.4 | 7.0 | 6.5 |
| Pleasant | 148 | 1751 | 11.5 | 11.0 | 43.9 | 52.0 | 37.8 | 31.9 | 6.8 | 5.1 |
| Richland | 123 | 1495 | 4.1 | 5.1 | 57.7 | 57.5 | 38.2 | 37.4 | - | - |
| Rushcreek | 159 | 1468 | 1.9 | 2.5 | 67.3 | 61.1 | 27.7 | 23.8 | 3.1 | 2.6 |
| Violet | 228 | 3096 | 27.6 | 38.6 | 10.5 | 11.2 | 54.9 | 45.5 | 7.0 | 4.7 |
| Walnut | 190 | 2303 | 20.0 | 27.4 | 37.4 | 41.5 | 40.0 | 30.1 | 2.6 | 1.0 |
| County | 1951 | 20969 | 15.2 | 22.6 | 29.5 | 31.6 | 49.8 | 41.4 | 5.5 | 4.4 |

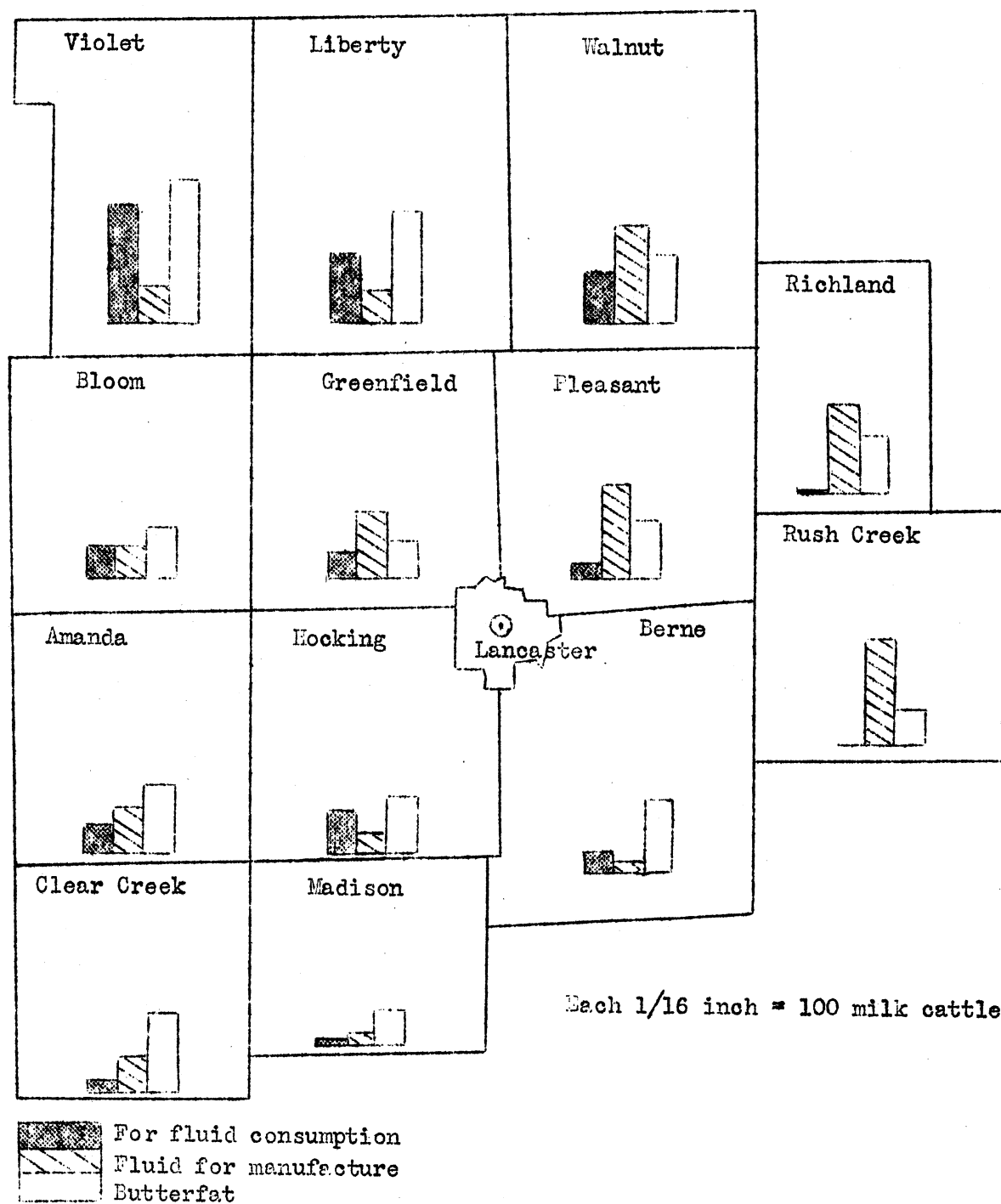


Figure 6. Number of Milk Cattle, by Market Outlet,
Fairfield County, 1939

Franklin County

Columbus and its suburbs constitute the largest concentration of population within the area. As a result it makes Franklin County the focal center of market outlets. Here is to be found the greatest number of milk distributors and the greatest concentration of manufacturing plants.

The City of Columbus through its Board of Health inspects all farms from which milk is sold for fresh consumption in Columbus. The plants under permit to sell in July, 1940 were as follows:

| <u>Distributors</u> | <u>Producer-Distributors</u> | <u>Distributing Brokers</u> |
|----------------------------|------------------------------|---------------------------------|
| Allen Milk Company | Ralph Barr | |
| J. R. Brandt | Black Bros. | Economy Dairy |
| E. C. Chambers | H. L. Gable & Son | Ed. Hess |
| M. E. Chambers | Pat Griffin | Orville Rader |
| Corbin Bros. | Fred Hastilow | |
| Diamond Dairy Products Co. | | |
| Dererfield Dairy | H. G. Henderlick | |
| DeWitt Milk Co. | Indian Springs Dairy | |
| H. F. Distelhorst | A. Keller | |
| Farmers Cooperative Dairy | A. R. McClish | |
| Fairmont Creamery Co. | C. E. North & Son | |
| | | |
| Gall Milk Co. | Oren Potter | |
| Gibson Milk Co. | A. J. Reinhard | |
| Hamilton Milk Co. | Chas. Saler | |
| High Grade Milk Co. | John Schaaf | |
| Home Producers | C. W. Schacht | |
| | | |
| Isaly Dairy Co. | Floyd Schleppi | |
| R. Moore | E. Scott | |
| Model Dairy | Shady Lane Dairy Co. | |
| Moores & Ross Milk Co. | P. Siegman | |
| Paillet Milk Co. | Smith Bros. | |
| | | |
| Pestel Milk Co. | Timmons Dairy | |
| Richer Dairy Co. | L. O. Walcutt | |
| Scioto Valley Milk & Ice | E. M. Ward & Son | |
| Cream Co. | Ray Weatherell | |
| Mrs. G. H. Slonaker | W. Wittman | |
| Westerville Creamery Co. | John Wolfe | |
| Youngs Dairy | | |

There were 1,767 farms on which 3 or more dairy cattle were tested. A large portion of the county outside the city and village corporations is suburban in character. Of the 18 townships there were 8 that had more than 100 farms in the survey. In these eight townships which are representative of the rural area of the county, 53.5 per cent of the farmers with 65.3 per cent of the cows were selling to city milk dealers. This indicates that there is no great economic pressure that forces the farmers immediately adjacent to Columbus into intensive dairying. This is due in large part to good transportation from adjacent counties, and lack of adaptability of many farms in Franklin County to dairying.

Table 14 - Number of Dairy Farms and Milk Cattle,
and Per cent of Each by Market Outlet, Franklin County, 1939

| Township | Total number of farms | Total number of milk cattle | For fluid consumption | | Fluid for manufacture | | Butterfat | | Not classified | |
|------------|--------------------------------|--------------------------------------|--------------------------|--------|--------------------------|--------|-----------|--------|-------------------|--------|
| | | | Milk | | Milk | | Milk | | Milk | |
| | | | Farm | cattle | Farm | cattle | Farm | cattle | Farm | cattle |
| | | | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) |
| Blendon | 149 | 1671 | 59.8 | 74.9 | - | - | 32.2 | 19.7 | 8.0 | 5.4 |
| Brown | 88 | 1191 | 48.9 | 55.9 | 5.7 | 4.2 | 42.0 | 38.8 | 3.4 | 1.1 |
| Clinton | 36 | 357 | 38.9 | 57.7 | 11.1 | 16.3 | 16.7 | 12.0 | 33.3 | 14.0 |
| Franklin | 61 | 755 | 65.6 | 79.9 | - | - | 21.3 | 11.9 | 13.1 | 8.2 |
| Hamilton | 79 | 1168 | 35.5 | 56.1 | - | - | 63.2 | 43.6 | 1.3 | .3 |
| Jackson | 147 | 1890 | 64.0 | 73.1 | 2.7 | 3.7 | 25.2 | 20.1 | 8.1 | 3.1 |
| Jefferson | 98 | 1050 | 34.7 | 47.4 | 11.2 | 11.6 | 49.0 | 37.8 | 5.1 | 3.2 |
| Madison | 211 | 3018 | 38.4 | 54.8 | 8.1 | 9.9 | 50.2 | 32.7 | 3.3 | 2.6 |
| Marion | 21 | 212 | 28.6 | 51.9 | - | - | 28.6 | 14.2 | 42.8 | 33.9 |
| Mifflin | 31 | 356 | 80.6 | 89.6 | - | - | 9.7 | 6.2 | 9.7 | 4.2 |
| Norwich | 103 | 1265 | 70.0 | 82.1 | 5.8 | 4.5 | 22.3 | 12.6 | 1.9 | .8 |
| Perry | 148 | 1566 | 49.3 | 62.4 | 14.9 | 15.4 | 30.4 | 19.3 | 5.4 | 2.9 |
| Plain | 118 | 1617 | 71.2 | 80.5 | 5.1 | 4.5 | 18.6 | 12.8 | 5.1 | 2.2 |
| Pleasant | 124 | 1422 | 49.2 | 56.5 | 1.6 | 1.1 | 40.3 | 35.2 | 8.9 | 7.2 |
| Prairie | 118 | 1335 | 47.5 | 62.4 | - | - | 51.7 | 36.6 | .8 | 1.0 |
| Sharon | 63 | 1074 | 73.0 | 87.7 | 6.3 | 4.7 | 3.2 | 1.4 | 17.5 | 6.2 |
| Truro | 84 | 1409 | 47.6 | 69.9 | - | - | 38.1 | 22.9 | 14.3 | 7.2 |
| Washington | 88 | 1109 | 57.9 | 66.0 | 21.6 | 17.0 | 8.0 | 4.6 | 12.5 | 12.4 |
| County | 1767 | 22465 | 53.1 | 66.6 | 5.7 | 5.4 | 33.7 | 23.6 | 7.5 | 4.4 |

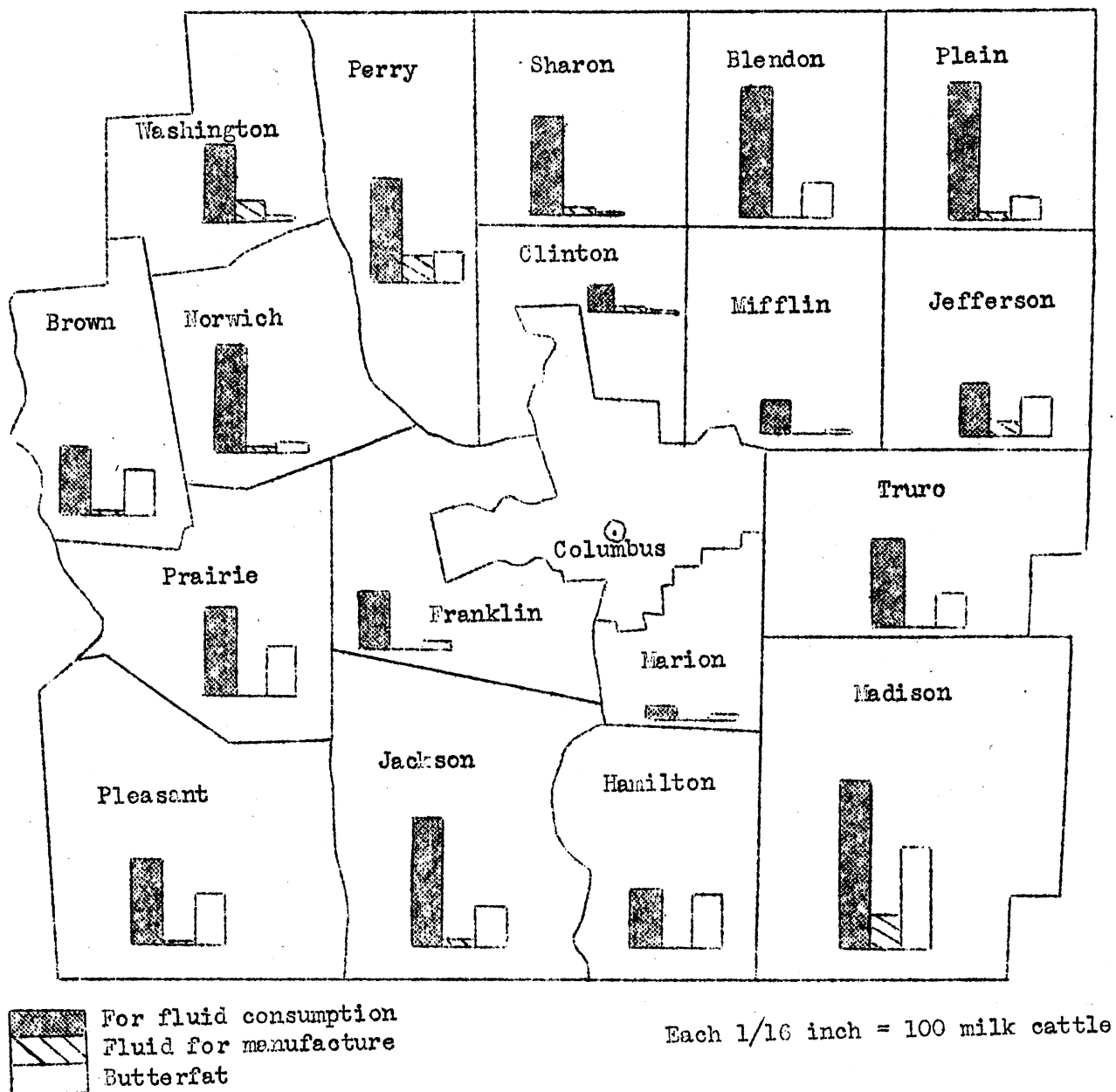


Figure 7. Number of Milk Cattle, by Market Outlet, Franklin County, 1939

Licking County

This county has more variable conditions with respect to outlets than the other counties of the area. The northeastern townships are an important part of the Columbus milk shed. There were four townships in which more than half the dairy farms were selling to city milk dealers. They were, Granville, Harrison, Jersey and Newark. Because of higher average of cows per farm on the city milk farms there were five other townships in which less than half the farms were classified in city milk, but more than 50 per cent of the cows were in this classification. They were Hartford, Lima, Monroe, St. Albans and Union. Eden Township was the only one in which the manufacturing outlet dominated. In eight of the remaining counties more farms were selling butterfat than all other outlets combined.

Most of the milk sold for manufacturing went to the Carnation Company at Coshocton and the M & R Dietetic Laboratory at Columbus. There was a market for some milk for manufacture in Newark. A small amount in the southeastern part of the county was going to the cheese factory at Bremen.

There was no county milk sanitation program in effect at the time of the survey. The City of Newark was supervising farms and plants. The plants under supervision by the Newark Board of Health were as follows:

DistributorsPlants, pasteurizing:

Furnas-Borden Milk Co.
Ed. Ross Dairy
Independent Dairy
Joe Spencer
Ralph Gebhart

Spring Brook Dairy
North Park Dairy
Claggett Dairy
Kelley Dairy
Mast Dairy

Alice Evans Dairy
Davis Company
Jay Butler

Producer-DistributorsRaw milk

Parkinson Dairy
W. B. Hoskinson Dairy
Charles Linn
Robert Swisher
Joseph Murphey

William Murphey
Horatio Holtz
Pete Sabo
BrynDu Dairy
Daniels'

Homer Shaw
G. P. Orr

Table 15 - Number of Dairy Farms and Milk Cattle
and Per cent of Each by Market Outlet, Licking County, 1939

| Township | Total number of farms | Total number of milk cattle | For fluid | | Fluid for | | Butterfat | | Not | |
|-------------|--------------------------------|--------------------------------------|-------------|--------|-------------|--------|-----------|--------|------------|--------|
| | | | consumption | | manufacture | | Milk | | classified | |
| | | | Milk | | Milk | | Milk | | Milk | |
| | | | Farm | cattle | Farm | cattle | Farm | cattle | Farm | cattle |
| | | | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) |
| Bennington | 139 | 1546 | 5.8 | 8.9 | 26.6 | 32.2 | 66.2 | 58.1 | 1.4 | .8 |
| Bowling Gr. | 89 | 1129 | 25.8 | 28.8 | 2.3 | 1.4 | 69.6 | 67.3 | 2.3 | 2.5 |
| Burlington | 101 | 1056 | 5.0 | 5.8 | 47.5 | 49.5 | 47.5 | 44.7 | - | - |
| Eden | 71 | 543 | - | - | 62.0 | 71.1 | 36.6 | 28.2 | 1.4 | .7 |
| Etna | 102 | 1125 | 38.2 | 49.4 | 8.8 | 7.9 | 47.1 | 36.6 | 5.9 | 6.1 |
| Fallsburg | 55 | 283 | - | - | 14.6 | 16.9 | 85.4 | 83.1 | - | - |
| Franklin | 87 | 1058 | 27.6 | 37.1 | 12.6 | 11.8 | 50.6 | 43.3 | 9.2 | 7.8 |
| Granville | 106 | 1590 | 57.5 | 67.7 | 14.2 | 13.9 | 26.4 | 17.3 | 1.9 | 1.1 |
| Hanover | 56 | 456 | 19.7 | 25.9 | 30.3 | 35.3 | 46.4 | 35.3 | 3.6 | 3.5 |
| Harrison | 114 | 1711 | 59.7 | 71.3 | - | - | 36.8 | 24.8 | 3.5 | 3.9 |
| Hartford | 129 | 1876 | 41.1 | 51.1 | 35.7 | 33.0 | 23.2 | 15.9 | - | - |
| Hopewell | 40 | 408 | 27.5 | 33.6 | 22.5 | 21.6 | 37.5 | 27.7 | 12.5 | 17.1 |
| Jersey | 144 | 2040 | 53.5 | 64.6 | 23.6 | 21.3 | 22.9 | 14.1 | - | - |
| Licking | 131 | 1806 | 32.1 | 45.8 | 8.4 | 10.1 | 58.0 | 43.3 | 1.5 | .8 |
| Liberty | 108 | 1294 | 25.9 | 30.8 | 35.2 | 41.6 | 38.0 | 26.2 | .9 | 1.4 |
| Lima | 125 | 2241 | 47.2 | 64.5 | 10.4 | 9.1 | 40.0 | 25.3 | 2.4 | 1.1 |
| Madison | 120 | 1326 | 25.0 | 33.2 | 23.3 | 21.8 | 48.4 | 43.0 | 3.3 | 2.0 |
| McKean | 118 | 1261 | 22.9 | 33.7 | 28.0 | 31.2 | 49.1 | 35.1 | - | - |
| Mary Ann | 60 | 535 | 18.4 | 32.3 | 30.0 | 29.3 | 51.6 | 38.4 | - | - |
| Monroe | 108 | 1406 | 43.6 | 53.1 | 34.2 | 31.8 | 18.5 | 12.0 | 3.7 | 3.1 |
| Newark | 133 | 1704 | 64.6 | 73.9 | 9.8 | 7.6 | 20.3 | 14.9 | 5.3 | 3.6 |
| Newton | 97 | 1023 | 36.1 | 44.1 | 13.4 | 11.4 | 50.5 | 44.5 | - | - |
| Perry | 52 | 410 | - | - | 23.1 | 33.9 | 76.9 | 66.1 | - | - |
| St. Albans | 114 | 1659 | 46.5 | 59.5 | 10.5 | 9.3 | 38.6 | 29.2 | 4.4 | 2.0 |
| Union | 161 | 2105 | 39.8 | 57.3 | 6.8 | 6.1 | 49.7 | 34.0 | 3.7 | 2.6 |
| Washington | 85 | 772 | 23.6 | 29.9 | 43.5 | 41.7 | 25.9 | 18.3 | 7.0 | 10.1 |
| County | 2645 | 32363 | 33.4 | 46.0 | 21.0 | 19.8 | 43.0 | 32.0 | 2.6 | 2.2 |

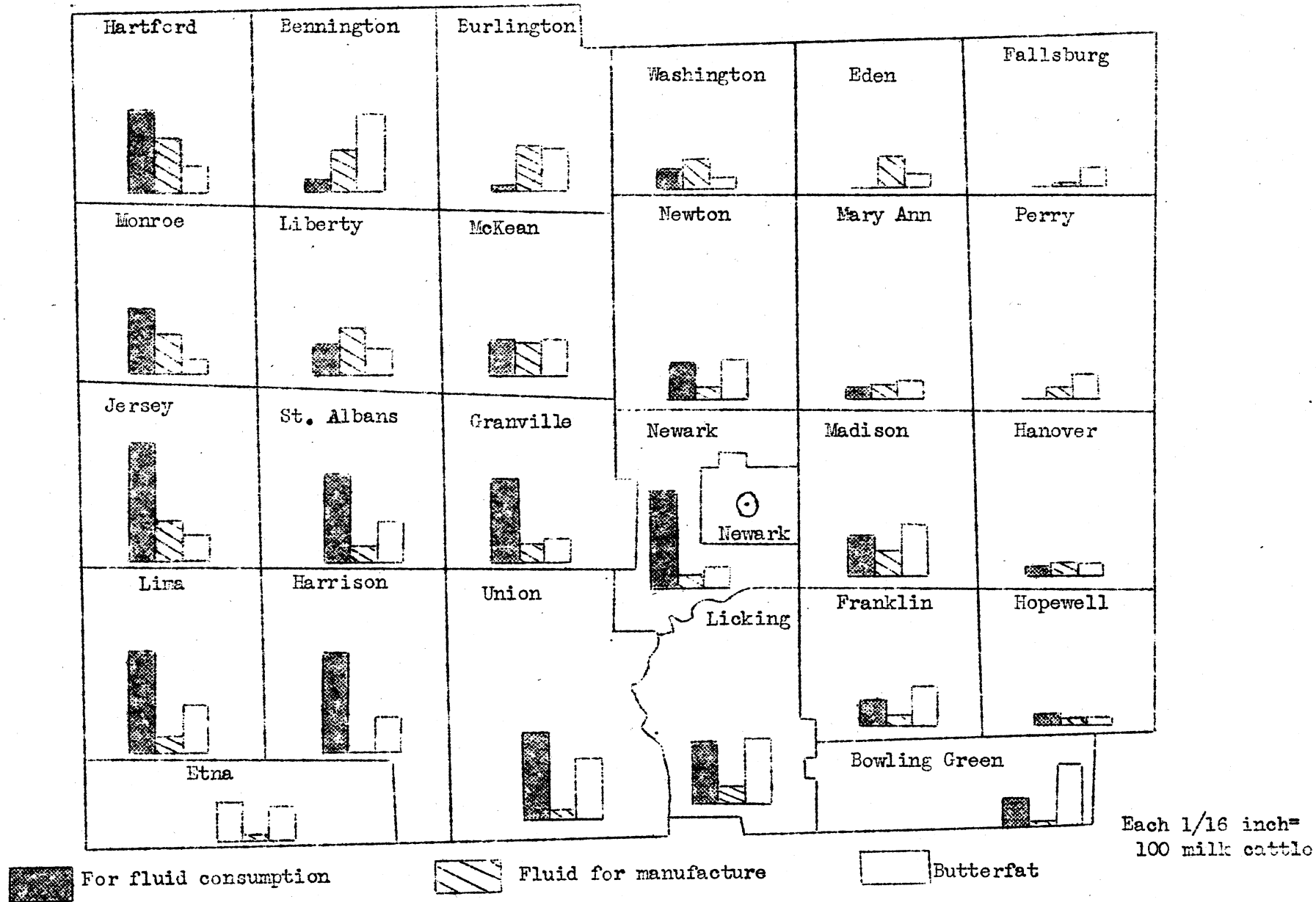


Figure 8. Number of Milk Cattle, by Market Outlet, Licking County, 1939

Madison County

Madison County was predominantly a butterfat producing area at the time of the survey. There were only two townships with any considerable number of farms going to city milk dealers. They were Canaan and Darby, with 36 and 35 farms, respectively. There was no other township with more than 20 farms going to city milk dealers. Of 851 farms in the survey, 447 were selling butterfat and 191 were selling to milk manufacturing plants.

The county is at present going under joint county and city operation of the U. S. Public Health Service Milk Ordinance. There were at the time of the survey 26 producers under permit. The fee charged is \$1.00. The dealers operating in Madison County were:

Distributors

Smith Dairy

Producer-Distributors

Leach Dairy
L. O. Walcutt
Joseph Taylor
Hershel Campbell
Ridenour Bros. Dairy
James Timmons
Russel Hill

Table 16 - Number of Dairy Farms and Milk Cattle
and Per cent of Each by Market Outlet, Madison County, 1939

| Township | Total number of farms | Total number of milk cattle | <u>For fluid</u> <u>consumption</u> <u>Milk</u> | | <u>Fluid for</u> <u>manufacture</u> <u>Milk</u> | | <u>Butterfat</u> <u>Milk</u> | | <u>Not</u> <u>classified</u> <u>Milk</u> | |
|------------|--------------------------------|--------------------------------------|---|--------|---|--------|---------------------------------|--------|--|--------|
| | | | Farm cattle | | Farm cattle | | Farm cattle | | Farm cattle | |
| | | | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) |
| Canaan | 89 | 1211 | 40.5 | 51.5 | 23.6 | 22.6 | 29.2 | 22.2 | 6.7 | 3.7 |
| Darby | 75 | 1001 | 46.7 | 53.0 | 28.0 | 33.1 | 25.3 | 13.9 | - | - |
| Deer Creek | 34 | 378 | 5.9 | 10.8 | 14.7 | 11.9 | 70.6 | 58.5 | 8.8 | 18.8 |
| Fairfield | 65 | 523 | 9.2 | 10.3 | 9.2 | 13.6 | 78.5 | 72.1 | 3.1 | 4.0 |
| Jefferson | 111 | 1512 | 12.6 | 30.6 | 13.5 | 14.7 | 72.1 | 53.4 | 1.8 | 1.3 |
| Monroe | 43 | 595 | 6.9 | 11.6 | 41.9 | 49.6 | 46.5 | 34.6 | 4.7 | 4.2 |
| Oak Run | 30 | 523 | 20.0 | 21.0 | 20.0 | 32.5 | 60.0 | 46.5 | - | - |
| Paint | 69 | 750 | 7.2 | 6.9 | 8.7 | 13.1 | 63.8 | 64.5 | 20.3 | 15.5 |
| Pike | 61 | 756 | 9.8 | 16.0 | 42.7 | 49.5 | 45.9 | 33.9 | 1.6 | .6 |
| Pleasant | 65 | 631 | 16.9 | 31.1 | 6.2 | 10.1 | 75.4 | 57.5 | 1.5 | 1.3 |
| Range | 24 | 355 | 12.5 | 12.1 | 54.1 | 71.5 | 16.7 | 8.2 | 16.7 | 8.2 |
| Stokes | 67 | 754 | 22.4 | 32.2 | 8.9 | 13.4 | 67.2 | 52.4 | 1.5 | 2.0 |
| Summerford | 53 | 615 | 7.5 | 11.4 | 41.5 | 49.3 | 37.8 | 29.6 | 13.2 | 9.7 |
| Union | 63 | 924 | 34.9 | 58.1 | 34.9 | 22.6 | 30.2 | 19.3 | - | - |
| County | 849 | 10528 | 19.7 | 29.6 | 22.5 | 26.9 | 52.7 | 39.6 | 5.1 | 3.9 |

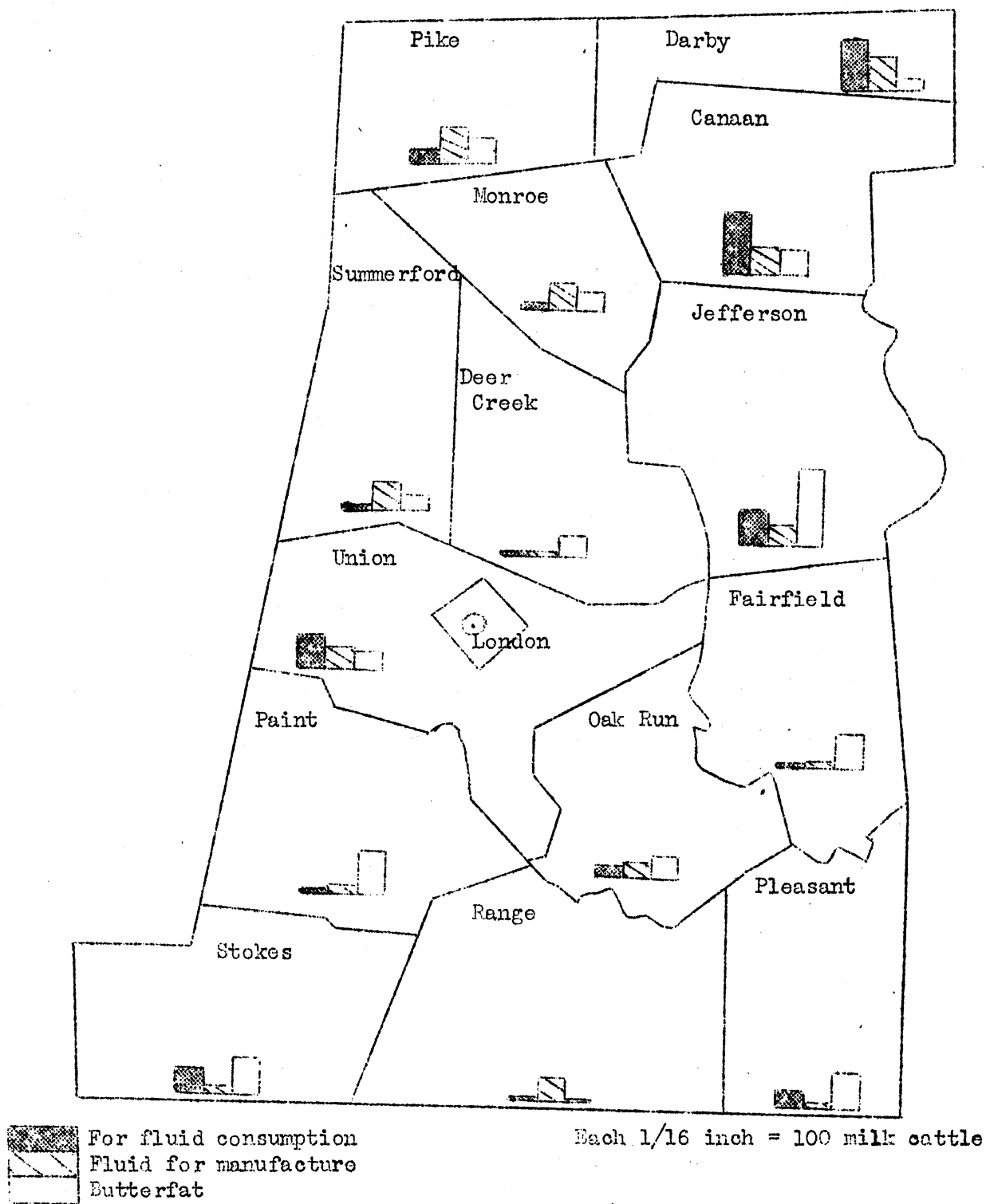


Figure 9. Number of Milk Cattle, by Market Outlet,
Madison County, 1939

Pickaway County

This county, like Madison, is predominantly a butterfat county. Of 1075 farms in the survey, 652 were selling butterfat and 183 milk for manufacturing. There were only three townships in which milk for city use assumed any importance. They were Pickaway, Walnut and Washington. The three townships had a total of 108 farms in this class.

At the time of the survey there was no sanitary inspection of plants or farms by either the town of Circleville, or the county. The U. S. Public Health Service Milk Ordinance had gone through three readings in the Council at Circleville but was tabled for further information.

The dealers distributing in Circleville were:

Distributors

Robinson Dairy
Blue Ribbon Dairy
David Harmon

Producer-Distributors

Mrs. Abbie Gussman
Hines Dairy

Table 17 - Number of Dairy Farms and Milk Cattle
and Per cent of Each by Market Outlet, Pickaway County, 1939

| Township | Total number of farms | Total number of milk cattle | For fluid consumption | | Fluid for manufacture | | Butterfat | | Not classified | |
|-------------|--------------------------------|--------------------------------------|--------------------------|--------|--------------------------|--------|-----------|--------|-------------------|--------|
| | | | Milk | | Milk | | Milk | | Milk | |
| | | | Farm | cattle | Farm | cattle | Farm | cattle | Farm | cattle |
| | | | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) |
| Circleville | 34 | 372 | 32.4 | 47.9 | 26.5 | 23.1 | 38.2 | 27.1 | 2.9 | 1.9 |
| Darby | 65 | 543 | 13.8 | 18.8 | 6.2 | 11.2 | 80.0 | 70.0 | - | - |
| Deer Creek | 59 | 516 | 15.3 | 31.0 | - | - | 83.0 | 67.6 | 1.7 | 1.4 |
| Harrison | 57 | 755 | 10.6 | 15.1 | 15.8 | 18.7 | 70.1 | 63.4 | 3.5 | 2.8 |
| Jackson | 71 | 663 | 2.8 | 2.3 | 14.1 | 16.4 | 78.9 | 77.2 | 4.2 | 4.1 |
| Madison | 71 | 770 | 15.5 | 27.7 | 9.9 | 6.6 | 70.4 | 62.6 | 4.2 | 3.1 |
| Monroe | 60 | 456 | 1.7 | 1.5 | 6.0 | 5.0 | 85.0 | 86.2 | 8.3 | 7.3 |
| Muhlenberg | 43 | 281 | 4.7 | 3.6 | 4.7 | 6.0 | 79.0 | 76.5 | 11.6 | 13.9 |
| Perry | 50 | 422 | 4.0 | 14.2 | 2.0 | 2.4 | 90.0 | 77.0 | 4.0 | 6.4 |
| Pickaway | 100 | 1519 | 45.0 | 68.7 | 16.0 | 11.7 | 32.0 | 14.3 | 7.0 | 5.3 |
| Salt Creek | 100 | 1087 | 13.0 | 13.5 | 46.0 | 60.6 | 41.0 | 25.9 | - | - |
| Scioto | 125 | 1117 | 14.4 | 23.5 | 24.8 | 26.8 | 60.0 | 48.4 | .8 | 1.3 |
| Walnut | 124 | 1393 | 29.8 | 46.7 | 8.1 | 13.8 | 53.2 | 34.2 | 8.9 | 5.3 |
| Washington | 69 | 818 | 46.4 | 61.4 | 17.4 | 17.0 | 36.2 | 21.6 | - | - |
| Wayne | 47 | 497 | 2.2 | 6.8 | 48.9 | 60.4 | 48.9 | 32.8 | - | - |
| County | 1075 | 11209 | 18.5 | 31.2 | 17.0 | 20.2 | 60.7 | 45.4 | 3.8 | 3.2 |

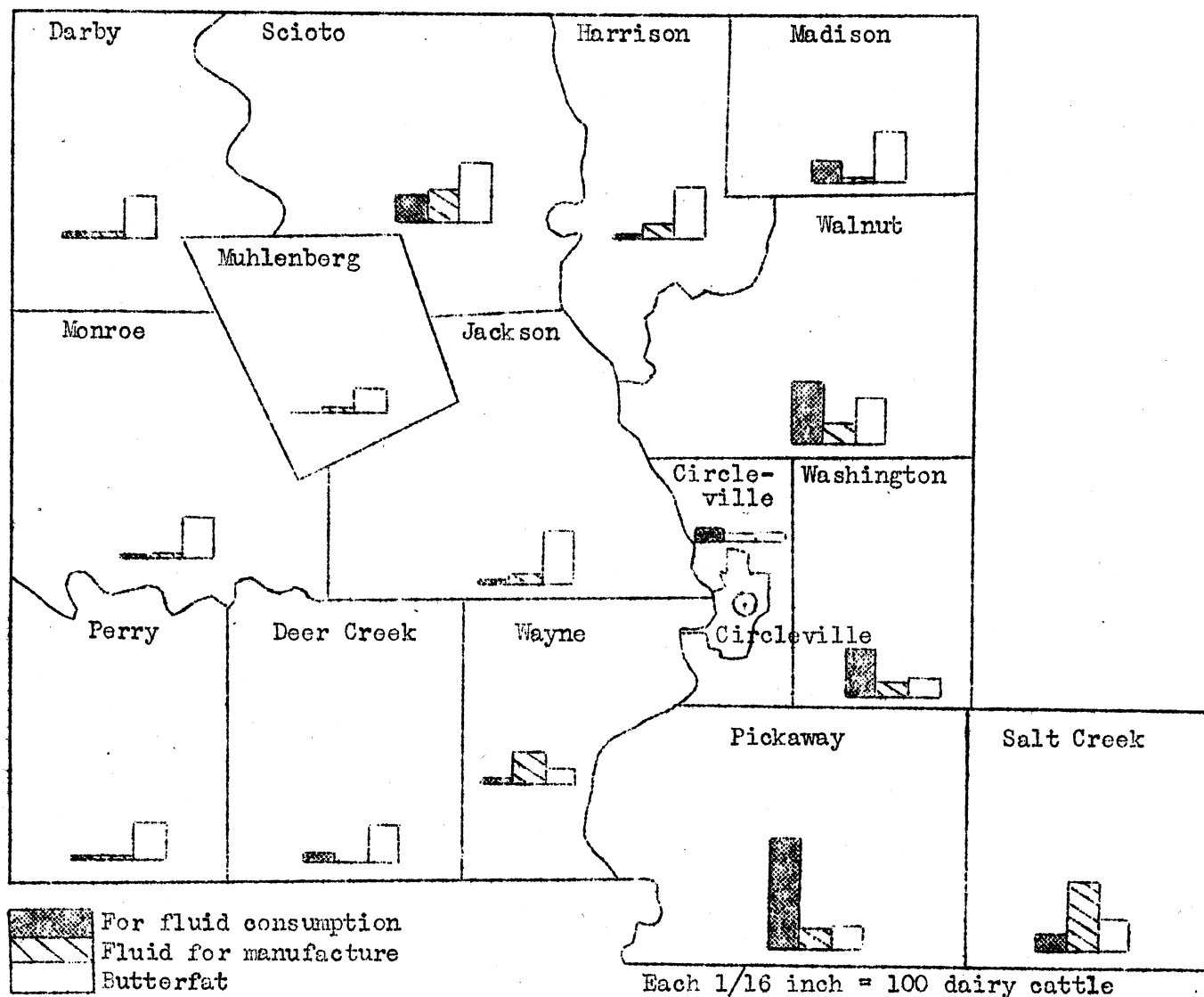


Figure 10. Number of Milk Cattle, by Market Outlet,
Pickaway County, 1939

Union County

This is the only county of the seven in which milk for manufacturing predominates. Of 1720 farms 917 are producing milk for manufacture. This is a reflection of the attractive market outlet provided by the plant of the Nestle's Milk Products Company at Marysville. Three townships represent some concentration of milk for city use. They are Darby, Jerome, and Mill Creek, with a total of 198 farms selling to milk dealers in Columbus.

The county is now operating under the U. S. Public Health Service Milk Ordinance. At the time of the study the dealers were as follows:

Distributors

Hill's Elm Dairy
Smith Dairy Co.
Southard Dairy

Producer-Distributors

R. Fryman L. J. Lake
Daisy Haines E. A. Harris
Snowden Dairy Clegg Dairy
Spain Dairy D. A. Snyder
Guy Prettyman

Floyd Sears
W. T. Ferguson
Bert Atherton
H. Donahue
W. Bowersmith

Table 18 - Number of Dairy Farms and Milk Cattle
and Per cent of Each by Market Outlet, Union County, 1939

| Township | Total number of farms | Total number of milk cattle | <u>For fluid</u> <u>consumption</u> <u>Milk</u> | | <u>Fluid for</u> <u>manufacture</u> <u>Milk</u> | | <u>Butterfat</u> <u>Milk</u> | | <u>Not</u> <u>classified</u> <u>Milk</u> | |
|------------|--------------------------------|--------------------------------------|---|--------|---|--------|---------------------------------|--------|--|--------|
| | | | Farm cattle | | Farm cattle | | Farm cattle | | Farm cattle | |
| | | | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) |
| Allen | 95 | 1215 | 2.1 | 3.0 | 60.0 | 66.3 | 35.8 | 29.1 | 2.1 | 1.6 |
| Claibourne | 196 | 1790 | 6.7 | 11.0 | 56.1 | 61.0 | 35.7 | 27.1 | 1.5 | .9 |
| Darby | 127 | 1839 | 65.4 | 76.4 | 4.7 | 3.3 | 29.1 | 19.8 | .8 | .5 |
| Dover | 113 | 1468 | 11.5 | 13.2 | 68.2 | 73.5 | 9.7 | 6.1 | 10.6 | 7.2 |
| Jackson | 89 | 707 | - | - | 49.4 | 61.1 | 46.1 | 35.2 | 4.5 | 3.7 |
| Jerome | 140 | 2011 | 51.5 | 63.8 | 31.4 | 24.8 | 10.7 | 7.1 | 6.4 | 4.3 |
| Leesburg | 109 | 1061 | 13.8 | 18.7 | 66.0 | 68.7 | 20.2 | 12.6 | - | - |
| Paris | 143 | 1881 | 23.8 | 28.0 | 58.0 | 56.3 | 9.1 | 8.1 | 9.1 | 7.6 |
| Liberty | 157 | 1739 | 5.1 | 3.5 | 61.2 | 67.5 | 29.9 | 25.0 | 3.8 | 4.0 |
| Millcreek | 91 | 1241 | 48.3 | 57.4 | 35.2 | 29.9 | 14.3 | 11.0 | 2.2 | 1.7 |
| Taylor | 123 | 1337 | 28.4 | 33.8 | 44.7 | 44.8 | 16.3 | 13.6 | 10.6 | 7.8 |
| Union | 110 | 1493 | 10.0 | 11.2 | 50.0 | 57.1 | 39.1 | 31.4 | .9 | .3 |
| Washington | 108 | 1398 | 4.7 | 2.5 | 81.5 | 88.1 | 12.9 | 9.2 | .9 | .2 |
| York | 130 | 1594 | 2.3 | 2.4 | 75.4 | 81.8 | 20.0 | 15.0 | 2.3 | .8 |
| County | 1731 | 20774 | 19.5 | 25.6 | 53.0 | 54.3 | 23.5 | 17.1 | 4.0 | 3.0 |

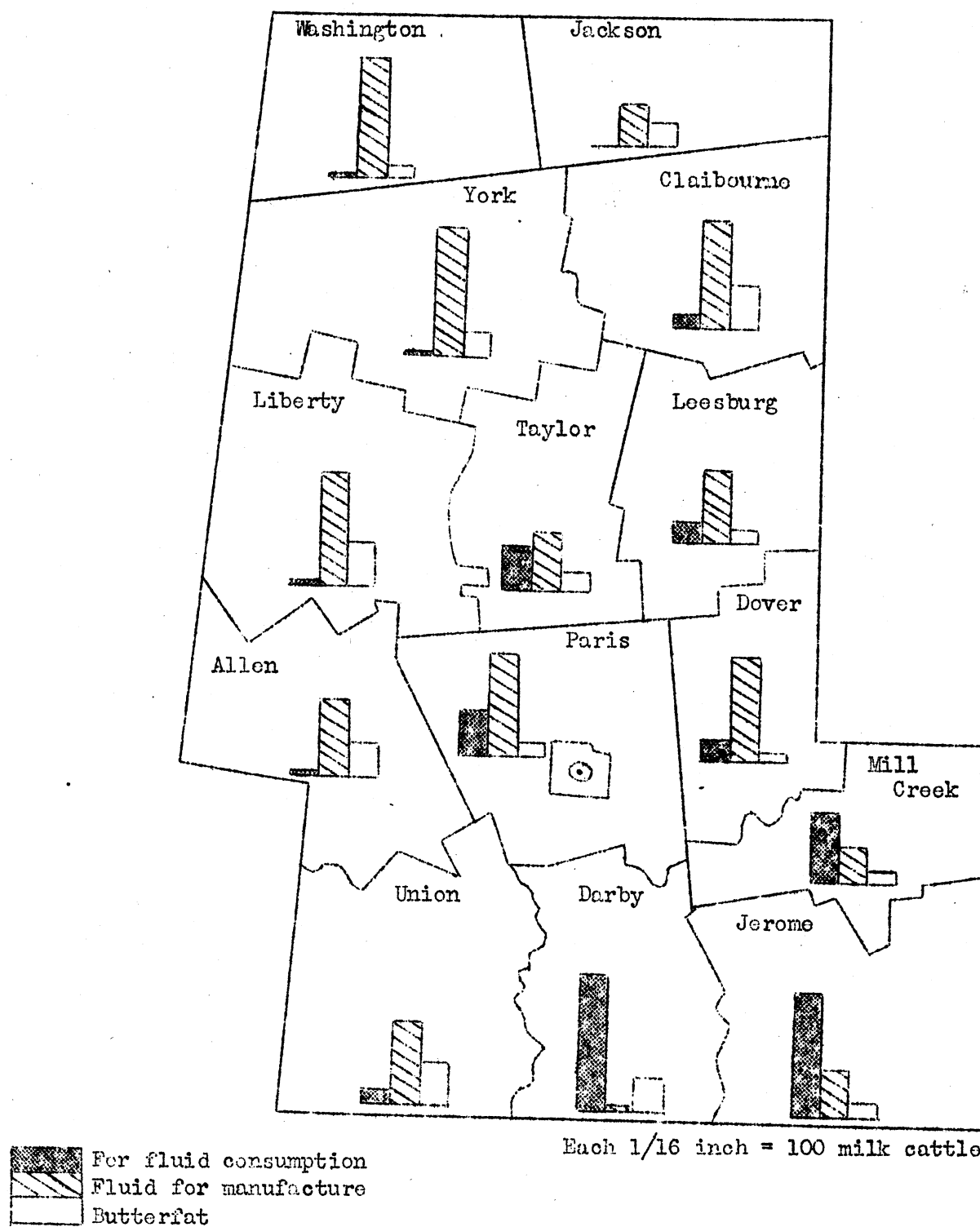
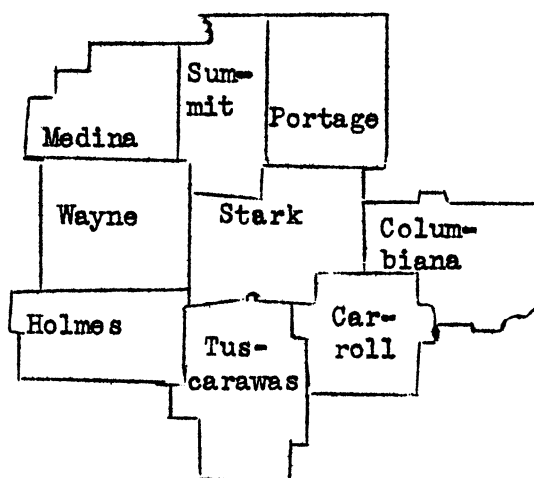


Figure 11. Number of Milk Cattle, by Market Outlet,
Union County, 1939

FARM SALES OF OHIO MILK THROUGH DIFFERENT OUTLETS

II. Akron-Canton Area: Carroll, Columbiana, Holmes, Medina,
Portage, Stark, Summit, Tuscarawas and Wayne Counties

C. G. McBride
and
R. W. Sherman



Department of Rural Economics
Mimeograph Bulletin No. 131 - Part II

Ohio State University
and
Ohio Agricultural Experiment Station

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Columbus, Ohio
May 1941

Farm Sales of Ohio Milk Through Different Outlets

Part II

Akron-Canton Area: Carroll, Columbiana, Holmes, Medina,
Portage, Stark, Summit, Tuscarawas and Wayne Counties

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FARM SALES OF MILK THROUGH DIFFERENT OUTLETS

II. Akron-Canton Area: Carroll, Columbiana, Holmes, Medina, Portage,
Stark, Summit, Tuscarawas and Wayne Counties

by
C. G. McBride and R. W. Sherman

Sources of Data

This study, the second of a series, is based upon a survey of all farms with three or more dairy cattle at the time of the last test for tuberculosis conducted by the U.S. Bureau of Animal Industry and the Ohio Department of Agriculture. The records were obtained through the cooperation of these authorities and Agricultural Extension Agents in charge of the records in the counties.

A list of herd owners was arranged by townships. Several copies of each list were made and these were mailed to a carefully selected group of key men, well distributed in each township. Each recipient of a list was asked to check the disposition of milk from each farm on which he had this information. When a producer was selling to a city milk dealer and either to a Swiss cheese factory or other manufacturing outlet he was recorded in the city milk dealer outlet. In case a producer was selling partly to a Swiss cheese factory and partly to some other type of manufacturing plant he was classified in the manufacturing outlet. Such shippers in this area were largely confined to Stark, Tuscarawas and Holmes Counties.

When the checked sheets were returned the reports for each township were combined and in most cases it was found that a practically complete record had been obtained. In a few townships, the returns were not full enough to constitute a satisfactory record. Personal visits were made into these townships in order to complete the data. A very high percentage of those who received lists cooperated by returning them promptly. Without this generous response on the part of those who were asked to assist, this survey would not have been possible. The cost in time and money of personal visitation to every township would have been prohibitive.

Limitations of the Study

Some difficulties were encountered in obtaining the information from the testing records. Some herds designated as mixed breeds undoubtedly were in whole or part beef cattle, but there was no way to determine the exact numbers. In areas surrounding the cities, there were many farms with 3 or 4 cattle tested. Replies indicated that many of these were kept primarily for home use but in some cases a small amount of milk or butter-fat might be sold at certain times. Those who reported often lacked accurate information as to disposal of dairy products on such farms.

Some farmers had moved out of the townships between the times of the test and the survey, but this factor was in large measure adjusted by the addition of new names by those reporting. In a very few cases, where all attempts to obtain a complete record left too large a percentage of farms unclassified, some adjustments were made, based on the records of adjacent townships with approximately the same conditions. Despite the limitations described above, it is believed that the study presents a dependable picture of the disposal of milk from the farms of the area.

Type of Farming

This area of the state is one of deficit grain production. Although the yield of wheat per acre is slightly above the state average and that for corn only slightly below the state average, the proportion of the area suitable for such crop production is far below that of Western and Central Ohio. The production of hay which in this area is almost as high as in any other section of the State helps to make dairying the most profitable type of farming enterprise.

The following table shows the importance of the dairy industry in these 9 counties. Dairying, 1934 to 1938, accounted for 45 per cent of all cash farm income of the area which was three times as much as for poultry, which ranked second. This was in marked contrast to the area of Central Ohio, summarized in the first bulletin of this series, where dairying was second to hogs as a source of cash income to farmers. Unlike the Central Ohio district, there was no great difference among the counties in the per cent of income coming from dairying. In each of the 9 counties dairying was by far the most important source of agricultural income.

Table 1. Important Sources of Cash Farm Income,
Percentage of Total Cash Farm Income Contributed by, and Rank of Each,
9 Northeastern Ohio Counties, 1934-38 average *

| County | Total cash farm income | Rank of sources of income and their relative importance | Pct. of | | | | Pct. of | | | |
|------------|---------------------------|--|---------|----------|--------|----------|---------|----------|-------|-------|
| | | | Total | First | Second | Third | Total | Fourth | Fifth | Sixth |
| Carroll | \$1,455,000 | DAIRY | 43 | Poultry | 19 | Sheep | 8 | Hogs | 7 | |
| Columbiana | 3,728,000 | DAIRY | 44 | Poultry | 15 | Potatoes | 9 | Fruit | 8 | |
| Holmes | 2,950,000 | DAIRY | 41 | Poultry | 23 | Hogs | 13 | Wheat | 8 | |
| Medina | 3,453,000 | DAIRY | 48 | Poultry | 17 | Wheat | 7 | Potatoes | 7 | |
| Portage | 3,249,000 | DAIRY | 53 | Potatoes | 14 | Poultry | 11 | Truck | 6 | |
| Stark | 4,482,000 | DAIRY | 47 | Poultry | 13 | Truck | 8 | Wheat | 7 | |
| Summit | 1,998,000 | DAIRY | 45 | Poultry | 12 | Truck | 10 | Potatoes | 7 | |
| Tuscarawas | 2,776,000 | DAIRY | 50 | Poultry | 14 | Wheat | 7 | Hogs | 7 | |
| Wayne | 5,926,000 | DAIRY | 40 | Poultry | 15 | Wheat | 15 | Potatoes | 8 | |
| 9 Counties | \$30,017,000 | DAIRY | 45 | Poultry | 15 | Wheat | 8 | Potatoes | 7 | |

* This table is a weighted average of the Gross Cash Income figures published yearly in mimeograph form by the Department of Rural Economics, Ohio State University and Ohio Agricultural Experiment Station.

Transportation Facilities

The status of market outlets for milk in any area depends greatly upon the transportation facilities. In the early movement of milk to Pittsburgh, Akron and Cleveland the railroads and electric lines played an important part. In this area the transportation of milk and cream to city markets is now entirely by motor truck. Some cheese factory deliveries are still made by horse drawn vehicle.

The area presents a wide variety of highway types. The public road mileage as of January 1, 1940, classified in three types, hard surface, gravel and earth, is given by counties in Table 2. While the area

contains several arterial highways of brick and cement over half the mileage was of gravel. These two types, which constitute year round roads for milk transportation, comprised three-fourths of the total. There remained in the nine counties 2308 miles of earth road.

The high percentage of earth roads in Holmes and the western part of Tuscarawas Counties has had some effect on the survival of the Swiss cheese industry, but it is not the only factor. Location of some of the newer factories built within the past 10 years was chosen on a heavily traveled highway in order to attract patronage to the retail sales room operated in connection with the plant.

The Wooster Farm Dairies operating as a cooling plant for Cleveland drew its supply largely from the area south of Wooster in Wayne and Holmes Counties where the highway facilities make direct haul to Cleveland inadvisable under present conditions.

The plant of the Windsor Evaporated Milk Company at Carrollton drew its supply largely from Carroll and Columbiana Counties. A considerable number of the patrons to this plant fluctuated between whole milk to the plant and sour cream sales. A part of this shifting was due to the fact that many of these farms on earth roads did not have daily access to market at all times of year.

Table 2. Public Road Mileage of the Area by Types and by Counties as of January 1, 1940

| County | Hard Surface | | Gravel | | Earth | | Total |
|------------|--------------|--------|---------|--------|---------|--------|-------|
| | (Miles) | (Pct.) | (Miles) | (Pct.) | (Miles) | (Pct.) | |
| Carroll | 45 | 4.5 | 773 | 77.3 | 182 | 18.2 | 1000 |
| Columbiana | 277 | 23.7 | 258 | 22.0 | 636 | 54.3 | 1171 |
| Holmes | 78 | 7.7 | 506 | 50.2 | 425 | 42.1 | 1009 |
| Medina | 168 | 21.0 | 574 | 69.0 | 84 | 10.0 | 826 |
| Portage | 264 | 26.3 | 666 | 66.2 | 75 | 7.5 | 1005 |
| Stark | 336 | 26.3 | 777 | 60.9 | 164 | 12.8 | 1277 |
| Summit | 278 | 35.4 | 244 | 31.1 | 263 | 33.5 | 785 |
| Tuscarawas | 169 | 14.1 | 820 | 68.2 | 214 | 17.7 | 1203 |
| Wayne | 187 | 14.7 | 817 | 64.4 | 265 | 20.9 | 1269 |
| Total | 1802 | 18.9 | 5435 | 56.9 | 2308 | 24.2 | 9545 |

Comparison of Study Data with Census and Crop and Livestock Reports

The United States Census and the Federal-State Cooperative Crop and Livestock Reporting Service have a listing of "cows and heifers 2 years old and over". This can be considered as a rough classification to include milk cows.

The test records from which this study was made listed all cattle tested. Two producer organizations in the area had records showing the number of milk cows in the herds of its members. These records were compiled in 1940 and the test records covered 1937, 1938 and 1939. It was assumed that not enough time has elapsed between the two to destroy the value of a comparison.

In these sets of records there were found 754 identical farms. The number of cattle tested was compared with the number of milk cows on the farms of the association members, and it was found that for this area there were 67.3 milk cows for each 100 dairy cattle tested. This ratio has been used as a conversion factor to convert "all cattle" of the test records to an estimated number of "milk cows". These computed figures are compared with the Crop and Livestock estimates in Table 3.

Table 3. Number of Cows and Heifers, 2 Years Old and Over, Number of Milk Cows Number of Cows Milked per Farm and Number of Cattle and Milk Cows per Farm in the Study, by Counties

| County | Milk cows & heifers | Milk cows in study** | Cows*** | All cattle in study | Cows in study** |
|------------|---|-------------------------|-------------------------|------------------------|--------------------|
| | 2 yrs. old & over Crop & Livestock estimates, 1939* | | per farm 1940 Census | | |
| Carroll | 9,300 | 8,639 | 5.4 | 10.0 | 6.7 |
| Columbiana | 17,300 | 13,076 | 5.9 | 11.0 | 7.4 |
| Holmes | 14,000 | 13,945 | 7.1 | 11.7 | 7.9 |
| Medine | 15,900 | 13,125 | 6.4 | 11.4 | 7.7 |
| Portage | 16,500 | 14,588 | 6.3 | 13.7 | 9.2 |
| Stark | 20,300 | 17,018 | 7.0 | 11.3 | 7.6 |
| Summit | 8,300 | 5,669 | 5.0 | 11.6 | 7.8 |
| Tuscarawas | 16,400 | 14,863 | 6.3 | 11.6 | 7.8 |
| Wayne | 23,100 | 22,251 | 7.1 | 12.0 | 8.1 |
| 9 counties | 141,100 | 123,174 | 6.3 | 11.6 | 7.8 |
| State | 1,043,000 | xxx | 5.3 | xx | xx |

* Preliminary

** Conversion factor of 67.3 used, as explained above.

*** Cows and heifers 2 years old and over kept mainly for milk production, 1939.

In all counties the number of milk cows computed from the study data is smaller than the Crop and Livestock Service estimate. This is accounted for largely by two factors: first, this study does not include the one- and two-cow farms and this omission is of especial significance in counties with large suburban areas; and second, it is probable that fewer cows of beef breeds are included in the study than in the crop and livestock estimates.

In Table 3 a comparison also is made of cows per farm as recorded in the 1940 Census with the computed figures of the study. In the Census figures the total number of cows milked anytime during 1939 were divided by the number of farms reporting cows and heifers 2 years old and over kept mainly for milk production. The average per farm of milk cows for the study was computed by applying the conversion factor mentioned above to all cattle tested. It is obvious that the average of the study would be higher than for the Census, because the farms with 1 or 2 milk cows are included in the Census but not in the survey.

Table 4. Sales of Whole Milk and Butterfat and Number of Farms Reporting Each, by County, 1939

| County | Farms report- ing whole milk sold (number) | Annual sales of whole milk per farm reporting (gallons) | Farms report- ing cream sold as butterfat (number) | Annual sales of butterfat per farm (pounds) |
|------------|---|--|---|--|
| Carroll | 753 | 3085 | 541 | 431 |
| Columbiana | 1323 | 5720 | 469 | 688 |
| Holmes | 1234 | 4564 | 673 | 774 |
| Medina | 1405 | 5904 | 287 | 607 |
| Portage | 1486 | 5541 | 248 | 508 |
| Stark | 1844 | 4838 | 434 | 642 |
| Summitt | 751 | 4963 | 59 | 489 |
| Tuscarawas | 1215 | 4815 | 467 | 443 |
| Wayne | 1831 | 5789 | 974 | 632 |
| 9 counties | 11842 | 5052 | 4152 | 566 |

Source: 1940 Census of Agriculture, First Series, Ohio

In Table 4 is listed the number of farms selling whole milk and butterfat for 1939 according to the 1940 Census. The 4 counties Carroll, Holmes, Tuscarawas and Wayne sold approximately 65 percent of the butterfat from this 9-county area. Since 1930 there had been an increase of 1484 farms selling whole milk in this area with a corresponding decrease in number selling butterfat. Almost half of the shift from butterfat to whole milk occurred in Carroll and Tuscarawas Counties.

Table 5. Number of Dairy Cows Compared with Total Population in Counties of the Area, 1900 and 1940

| County | 1900 | | | 1940 | | |
|------------|----------------|---------------------|----------------------------|----------------|---------------------|----------------------------|
| | Dairy cows* | Total Population | Cows per 100 population | Dairy cows* | Total population | Cows per 100 population |
| Carroll | 7,600 | 16,811 | 45 | 8,784 | 17,449 | 50 |
| Columbiana | 15,911 | 68,590 | 23 | 16,330 | 90,121 | 18 |
| Holmes | 8,930 | 19,511 | 46 | 14,776 | 17,876 | 83 |
| Medina | 11,266 | 21,958 | 51 | 15,777 | 33,034 | 48 |
| Portage | 15,807 | 29,246 | 54 | 16,621 | 46,660 | 36 |
| Stark | 17,152 | 94,747 | 18 | 20,047 | 234,887 | 9 |
| Summit | 15,330 | 71,715 | 21 | 8,328 | 339,405 | 2 |
| Tuscarawas | 13,267 | 53,751 | 25 | 14,738 | 68,816 | 21 |
| Wayne | 13,765 | 37,870 | 36 | 22,871 | 47,024 | 49 |
| 9 counties | 119,028 | 414,199 | 29 | 138,272 | 895,272 | 15 |

Source: U. S. Census of Population and of Agriculture, 1900 and 1940

* Cows and heifers 2 years old and over kept mainly for milk production, 1939.

The population increased in all of the 9 counties with the exception of Holmes where there was a decrease of about two thousand. In Stark and Summit Counties the increase was phenomenal. These figures as well as the number of cows per 100 population are given in Table 5. The change in these two counties was due mostly to the growth of Akron, Canton, Massillon and Alliance. The total population of these four cities in 1900

was 94,313 and in 1940 the total was 402,241. In 1900 all of the 9 counties produced enough milk for fluid consumption within the county. In 1940, Summit County produced only about 30 per cent of its requirements for fluid consumption, while Stark County produced just slightly in excess of its needs. The other 7 counties produced almost double their requirements.

Changes in Market Outlets, 1903 to 1940

One of the first records of a systematic survey of outlets for milk and butterfat from Ohio farms is found in the annual report of the Ohio Dairymen's Association for 1903.¹ Professor J. W. Decker of Ohio State University compiled this directory of butter and cheese factories and milk skimming and shipping stations. The totals for the state were: butter factories, 148; skimming stations, 77; milk shipping stations, 22; American cheese factories, 114; Swiss cheese factories, 92. The report did not include milk dealers who purchased from farmers nor producer-distributors who sold milk at retail.

The 9 counties of this area had in 1903, 25 creameries of butter factories; 13 skimming stations; 24 American cheese factories; and 66 Swiss cheese factories. The plants were classified as to type of ownership into private stock company and cooperative. In Table 6 these plants are listed by county and type. In 1903 the American cheese factories were concentrated in Portage, Summit and Medina counties; the Swiss cheese factories in Tuscarawas, Columbiana, Holmes and Stark Counties; and the creameries in Medina and Columbiana Counties.

Table 6. Dairy Plants in Area in 1903
(excluding those engaged only in Milk Distribution)

| County | Skimming stations | | | Butter manufacturing (creameries) | | | American cheese manufacturing | | | Swiss cheese manufacturing | | | Total |
|------------|-------------------|----|----|-----------------------------------|----|----|-------------------------------|----|----|----------------------------|----|----|-------|
| | P | S | C | P | S | C | P | S | C | P | S | C | |
| Carroll | -- | -- | -- | 1 | 1 | -- | -- | -- | -- | 1 | -- | -- | 3 |
| Columbiana | 1 | -- | -- | 7 | 1 | 3 | -- | -- | -- | 5 | -- | 17 | 34 |
| Holmes | 1 | -- | -- | 1 | -- | -- | -- | -- | -- | 1 | -- | 7 | 10 |
| Medina | 3 | -- | -- | 7 | -- | -- | 3 | -- | -- | -- | -- | -- | 13 |
| Portage | -- | 1 | -- | 2 | -- | -- | 11 | -- | 1 | -- | -- | -- | 15 |
| Stark | 2 | 1 | -- | -- | -- | -- | -- | -- | -- | 6 | -- | 4 | 13 |
| Summit | -- | -- | -- | -- | -- | 2 | 7 | -- | 1 | -- | -- | -- | 10 |
| Tuscarawas | -- | -- | -- | -- | -- | -- | -- | -- | -- | 4 | -- | 21 | 25 |
| Wayne | 4 | -- | -- | -- | -- | -- | 1 | -- | -- | -- | -- | -- | 5 |
| Total | 11 | 2 | -- | 18 | 2 | 5 | 22 | -- | 2 | 17 | -- | 49 | 128 |

KEY: P = Private

S = Stock

C = Cooperative

Source: Ohio Dairymen's Association Report of 1903.

¹/ Reprint Annual Report Ohio Dairymen's Association, 1903, J.W. Decker.

A survey of sources of market milk and butterfat in Ohio was made in 1931 by McBride and Cowden.^{2/} This survey recorded manufacturing operations. In 1931 there were 25 Swiss and no American cheese factories in this area. The American cheese factories had all been absorbed by the demand for whole milk for city distribution, or for manufacturing into condensed or evaporated milk. In 1931 Akron, Canton and Orrville were the only churning points of any economic significance.

By 1931 this area had become an important source of supply for milk and cream for the Cleveland market. The survey revealed 3716 farms in the 9 counties under Cleveland inspection. By 1940 the area had undergone some further changes in dairy plants. Swiss cheese factories numbered only about half as many as in 1903 but there had been a substantial increase over the number in 1931. The distribution of the 87 manufacturing plants by counties is given in Table 7. Figures 1 and 2 give a picture of the changes in character and location of dairy plants between 1903 and 1940.

Table 7. Dairy Plants in Area in 1940,
(excluding those engaged only in Milk Distribution)

| County | Cool- ing | Butter Manufac- turing | Milk con- densing or evaporating | Swiss cheese manufacturing | Combination including ice cream | Total |
|------------|--------------|------------------------------|--|----------------------------------|---------------------------------------|-------|
| Carroll, | -- | 1 | 1 | -- | 1 | 3 |
| Columbiana | 1 | 4 | 1 | -- | 8 | 14 |
| Holmes | -- | 1 | -- | 9 | 1 | 11 |
| Medina | -- | -- | 1 | -- | 3 | 4 |
| Portage | -- | 2 | 1 | -- | 1 | 4 |
| Stark | -- | 4 | -- | 9 | 9 | 22 |
| Summit | -- | 2 | 1 | -- | 4 | 7 |
| Tuscarawas | -- | -- | -- | 12 | 3 | 15 |
| Wayne | 1 | 1 | 1 | 1 | 3 | 7 |
| Total | 2 | 15 | 6 | 31 | 33 | 87 |

Source: Who's Who in the Butter, Cheese and Milk Industries in 1940. Records of the Ohio Dairy Products Association and the Ohio Swiss Cheese Association.

The most striking changes in plants between 1903 and 1940 were disappearance of the small creamery or butter factory and the appearance of the large manufacturing plants such as Orrville Milk Condensing Co., Orrville; Andalusia Dairy, Salem; Supreme Dairy, Alliance; Noacker Ice Cream Company, Canton; and Windsor Evaporated Milk Co., Carrollton. The Swiss cheese industry has had a steady growth in the past five years. A well organized and administered research program has been conducted by the Ohio Swiss Cheese Association in cooperation with the United States Department of Agriculture. Mr. Robert Farrar in charge of the program estimates that in 1940 the Swiss cheese factories under supervision made over 77,000,000 pounds of milk into Swiss cheese. There were 29 factories cooperating in the program.

^{2/} Ohio Agricultural Experiment Station Bulletin No. 523, Sources of Market Milk and Butterfat in Ohio. C. G. McBride and T. K. Cowden, 1933.

One of the significant marketing factors is the amount of milk that is sold to consumers as fresh milk direct from the farms. The farmer who sells in this manner is known as a producer-distributor. Some of these farms are operated on a definite commercial basis and require the full-time of one or more people, and a considerable investment in equipment. In general this type of farm will have 15 or more cattle in the dairy herd. On the other hand, there are a large number of farms from which some milk is sold to consumers who come to the farm for it. In the survey those who filled out records were asked to include both of these types as producer-distributors.

Under the Burk Act, in effect from July 1, 1933 to June 30, 1935, producer-distributors were licensed. A comparison was made of the farmers classified in this survey as producer-distributors with the lists of those licensed by the Commission in 1935. These data are given later in this bulletin in the county sections.

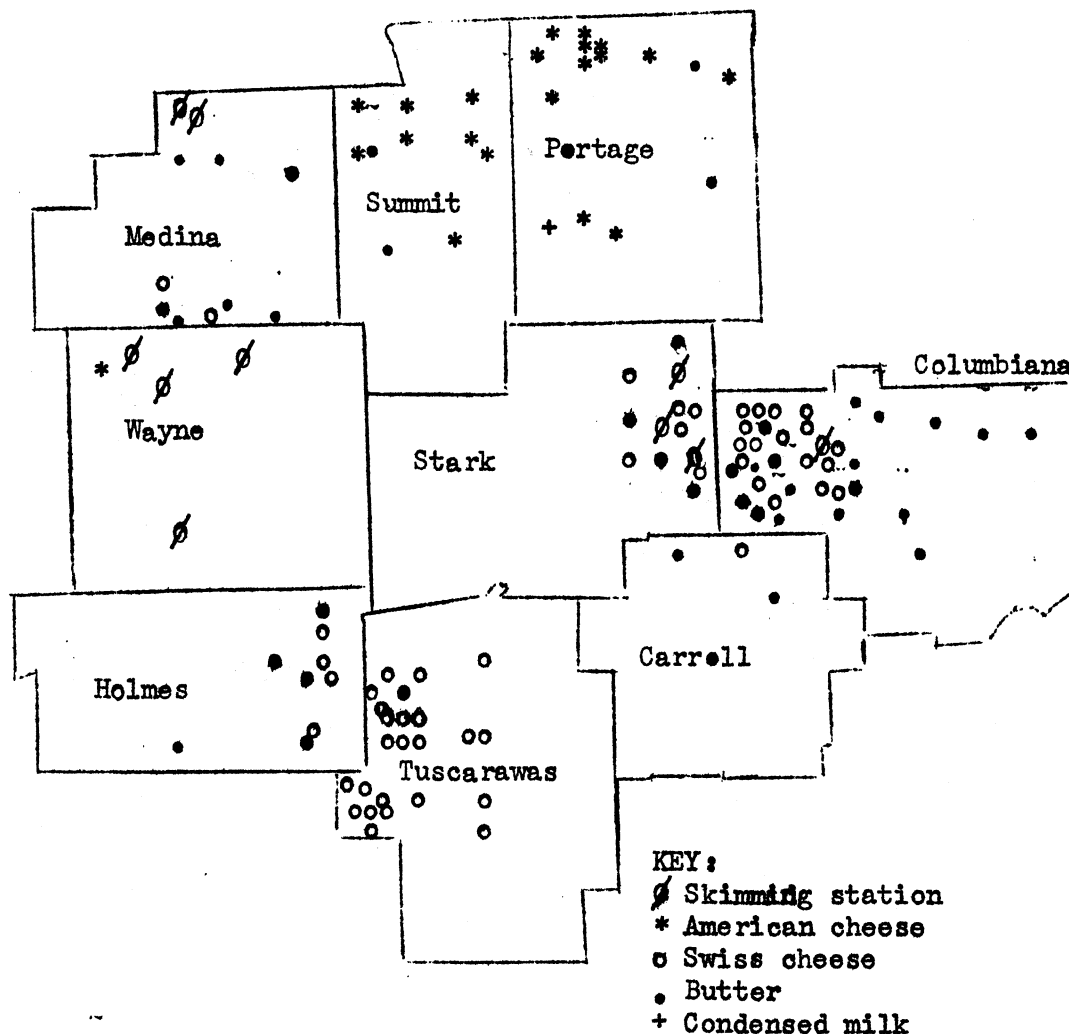


Figure 1. Milk skimming stations and manufacturing plants in area in 1903. Source: Annual Report Ohio Dairyman's Association, 1903.

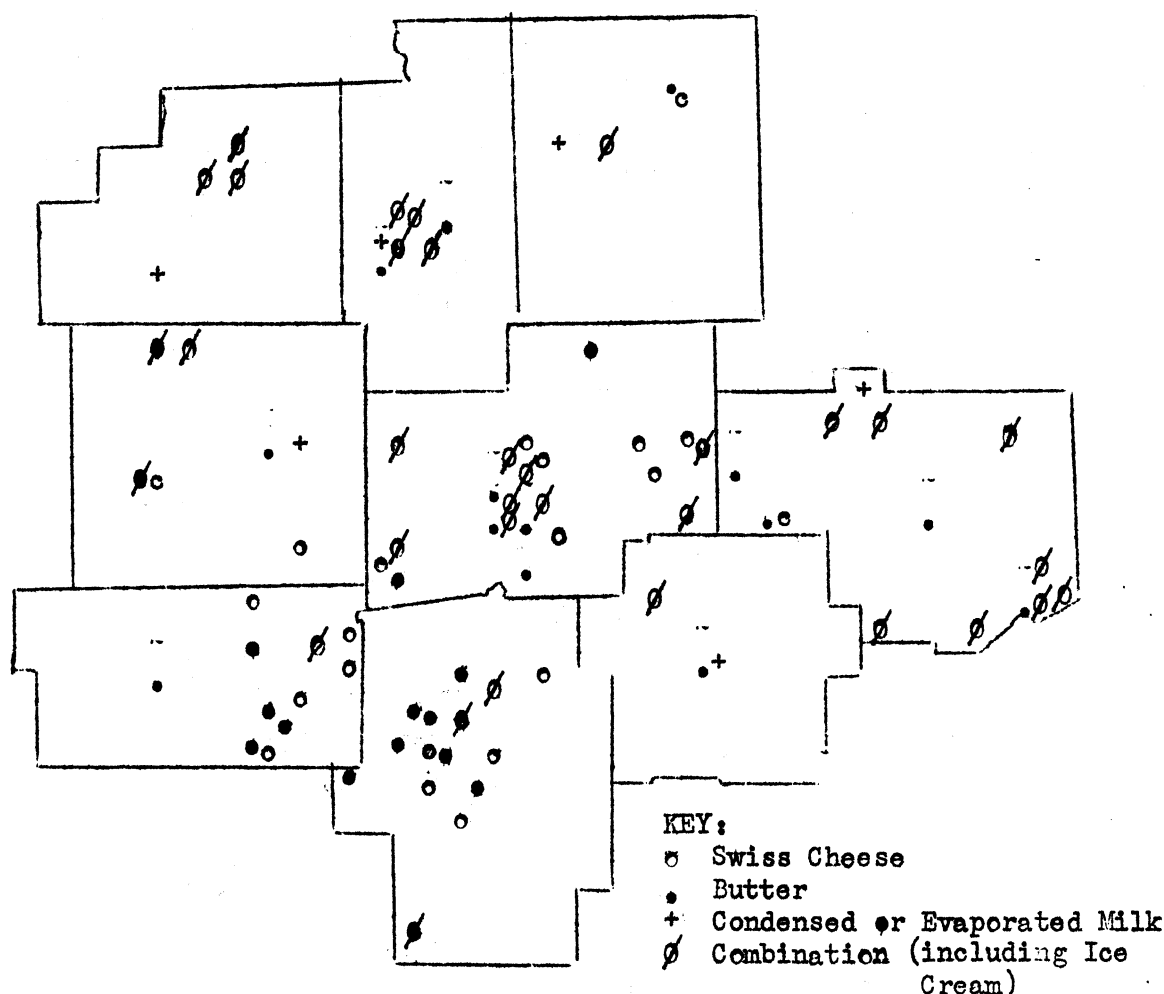


Figure 2. Milk manufacturing plants in area in 1940
(excluding those engaged only in milk distribution)

Status of Sanitary Controls by Health Boards

There is some degree of organized health control work in all the counties of the area. The complete full time unit including clerk, nurse and sanitarian exists in only a part of the counties as will be shown in the county sections of this bulletin. There are full time units in Portage, Summit, Medina, Wayne and Stark Counties, but not all of them have fully organized supervision of the milk supply.

The U. S. Public Health Service Standard Ordinance has not been adopted in full form in any health district in the county. This is in sharp contrast to the situation in the Central Ohio area covered in Part I of this series where the Ordinance was in effect or about to be put into effect in more than half the counties. This contrast is probably due to the extensive adoption of health regulations covering the milk supply before the funds became available to extend the U. S. Public Health program in the State.

Cooperative Marketing by Producers

This area has for many years been prominent in cooperative processing and marketing of dairy products. The cheese factories and small creameries that flourished in the area in the period 1875 to 1900 were some of the earliest examples of effective producer cooperation. This period preceded the passage of laws providing for cooperative corporations, but in structure and operation they were true cooperatives. A few of these operating at the time of the survey were incorporated under present cooperative acts but many of these have continued in their original form. In the small cheese cooperatives the building was sometimes owned by the group of patrons and sometimes by the cheese maker. Final returns on the milk delivered were made when the cheese was sold but partial payment was made at regular pay periods throughout the year.

The most outstanding accomplishment in the past 25 years has been in the marketing of fluid milk. Inasmuch as membership in the three outstanding cooperatives, the Stark County Milk Producers Association, the Milk Producers Association of Summit County and Vicinity and the Wooster Farm Dairies is concentrated largely in certain counties, these organizations will be discussed in the sections dealing with those counties.

Summary of Study by Counties and Townships

The material included in this section is a compilation of the information furnished by those who assisted in the mail survey supplemented by some additional data obtained in personal visits to the counties. Tables 8 to 11 and Figures 3 to 7 summarize the material for the district by counties. A discussion of each county with township analyses follows.

Table 8 summarizes the distribution of farms and cattle among the market outlets and Table 9 shows how these outlets rank as to number of cows per farm. In Table 10 the farms are distributed on a percentage basis and in Table 11 the cattle are so distributed among market outlets.

Milk sold by producer-distributors belongs in the same outlet classification as milk sold to dealers for fresh fluid consumption. In the county tables they are combined. To find the number of farms and cattle involved in supplying consumers with fresh milk it is necessary in all instances to combine the "Producer-Distributor" figures with those of "Fluid to Distributor." The total number of farms in this classification is 8138, or 51.7 per cent. These 8138 farms, however, have 56.4 per cent of the milk cattle because the larger dairy farms seek the city market outlets. The farms selling butterfat rank lowest in average number of cows per farm.

Among the counties the variation in per cent of dairy farms selling milk for fluid consumption is from 16.5 per cent for Holmes County to 78.8 per cent for Portage County. In the case of number of milk cows on farms selling milk for fluid consumption, Holmes County was low with 20.6 per cent and Summit was high with 86.7 per cent. Almost one third of the total number of farms selling butterfat in this 9 county area were in Wayne and Tuscarawas Counties.

The figures 3 to 7 show the concentration of cows in the district. Figure 3 includes all milk cows in herds with 3 or more dairy cattle. Figure 4 shows plainly the influence of the fluid milk markets of Akron, Canton and Alliance (the Cleveland market also draws a large amount of milk from this area) on the northern part of this area.

Table 8. Number of Dairy Farms and Number of Milk Cattle, by Market Outlet,
9 Northeastern Ohio Counties, 1940

| County | Producer Distributor | | Fluid to Distributor | | Fluid for Manufacture | | Swiss Cheese | | Butterfat | | Not Classified | | Total | |
|------------|----------------------|--------|----------------------|---------|-----------------------|--------|--------------|--------|-----------|--------|----------------|--------|--------|---------|
| | Farms | Cattle | Farms | Cattle | Farms | Cattle | Farms | Cattle | Farms | Cattle | Farms | Cattle | Farms | Cattle |
| Carroll | 34 | 406 | 229 | 3,160 | 448 | 4,627 | | | 525 | 4,360 | 53 | 283 | 1,289 | 12,836 |
| Columbiana | 117 | 1,379 | 975 | 12,761 | 124 | 1,330 | | | 492 | 3,554 | 63 | 405 | 1,771 | 19,429 |
| Holmes | 16 | 204 | 274 | 4,061 | 232 | 2,942 | 487 | 6,511 | 726 | 6,795 | 22 | 207 | 1,757 | 20,720 |
| Medina | 39 | 443 | 1,207 | 15,699 | 94 | 908 | | | 347 | 2,291 | 25 | 161 | 1,712 | 19,502 |
| Portage | 43 | 640 | 1,202 | 18,041 | 79 | 898 | 11 | 109 | 194 | 1,546 | 50 | 442 | 1,579 | 21,676 |
| Stark | 167 | 2,105 | 1,288 | 16,604 | 188 | 1,975 | 91 | 1,097 | 438 | 3,087 | 68 | 419 | 2,240 | 25,287 |
| Summit | 83 | 1,105 | 464 | 6,201 | 21 | 151 | | | 119 | 772 | 38 | 195 | 725 | 8,424 |
| Tuscarawas | 58 | 901 | 335 | 5,348 | 322 | 3,459 | 490 | 7,270 | 668 | 4,899 | 40 | 207 | 1,908 | 22,084 |
| Wayne | 43 | 828 | 1,564 | 21,416 | 388 | 4,860 | 14 | 175 | 688 | 5,377 | 52 | 406 | 2,749 | 33,062 |
| 9 Counties | 600 | 8,011 | 7,538 | 103,291 | 1,896 | 21,150 | 1,093 | 15,162 | 4,197 | 32,681 | 411 | 2,725 | 15,730 | 183,020 |

Table 9. Number of Milk Cattle per Farm by Market Outlet,
9 Northeast Ohio Counties

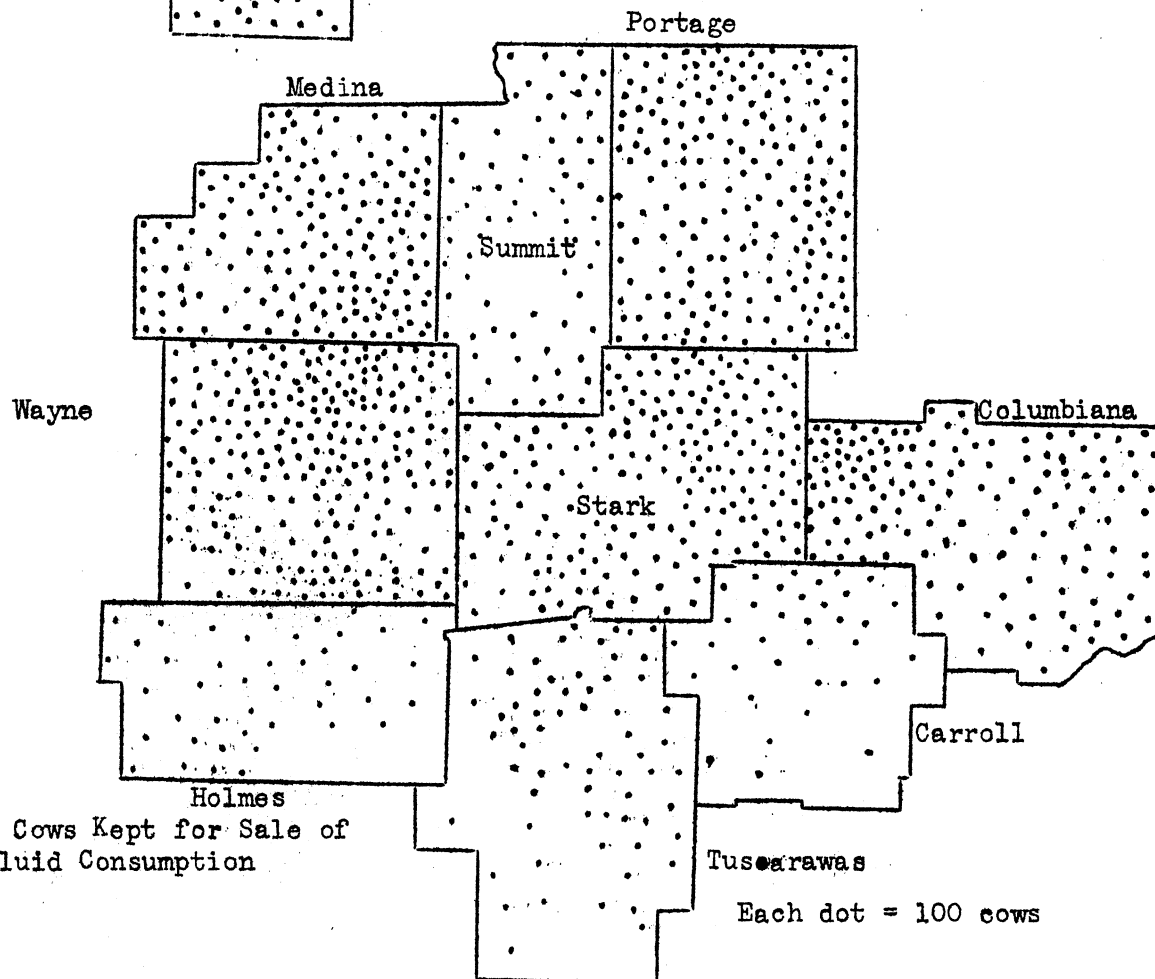
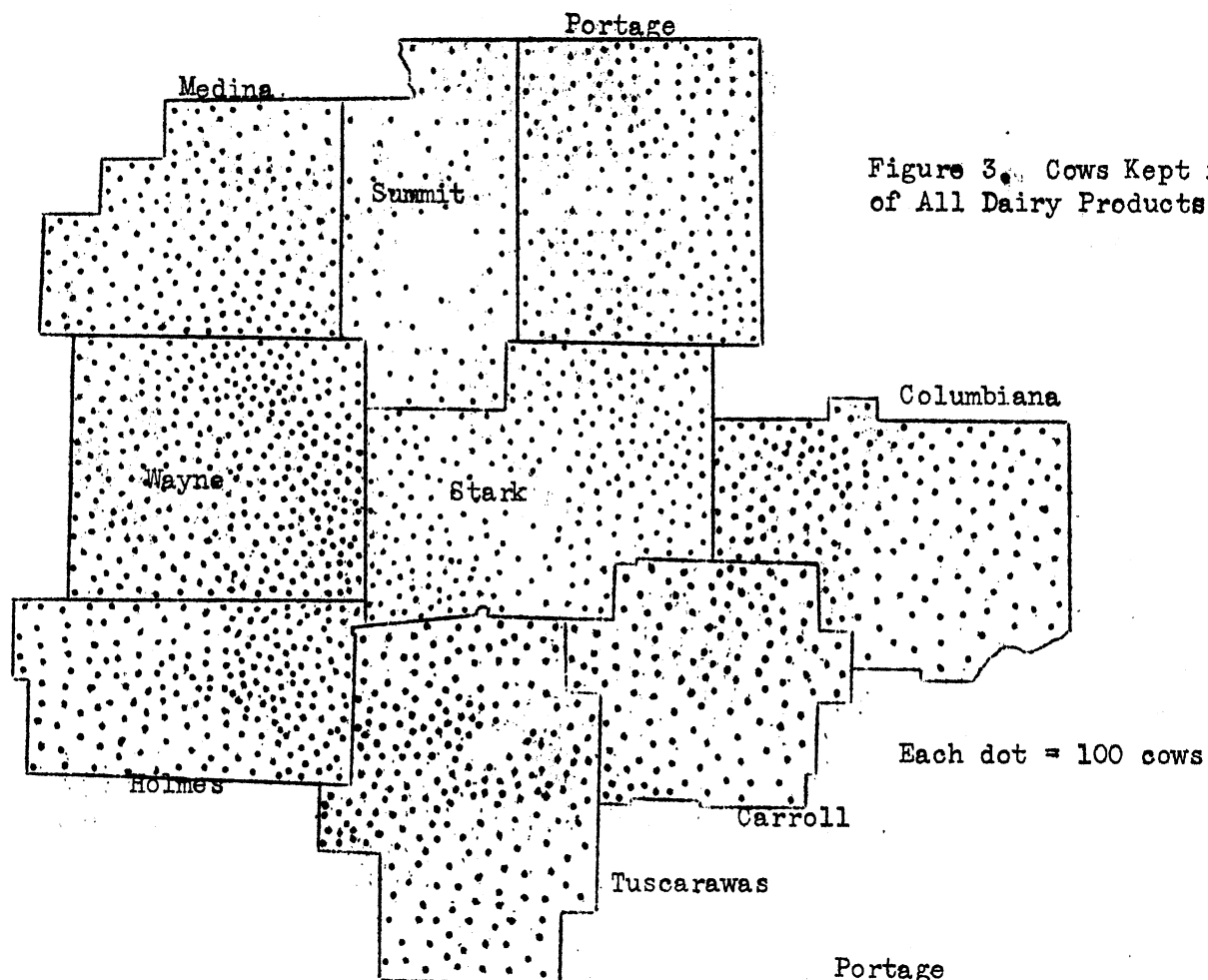
| County | Producer Distributor | Fluid to Distributor | For Swiss | | Butterfat | Not Classified | Total |
|------------|-------------------------|-------------------------|------------------------|--------------------------|-----------|-------------------|-------|
| | | | Cheese Manufacturer | For other Manufacture | | | |
| Carroll | 11.9 | 13.8 | | 10.3 | 8.3 | 5.3 | 10.0 |
| Columbiana | 11.8 | 13.1 | | 10.7 | 7.2 | 6.4 | 11.0 |
| Holmes | 12.8 | 14.8 | 13.4 | 12.7 | 9.4 | 9.4 | 11.8 |
| Medina | 11.4 | 13.0 | | 9.7 | 6.6 | 6.4 | 11.4 |
| Portage | 14.9 | 15.0 | 9.9 | 11.4 | 8.0 | 8.8 | 13.7 |
| Stark | 12.6 | 12.9 | 11.2 | 10.5 | 7.0 | 6.2 | 11.3 |
| Summit | 13.3 | 13.4 | | 7.2 | 6.5 | 5.1 | 11.6 |
| Tuscarawas | 15.5 | 16.0 | 14.8 | 10.7 | 7.3 | 5.1 | 11.6 |
| Wayne | 19.3 | 13.7 | 12.5 | 12.5 | 7.8 | 7.8 | 12.0 |
| 9 Counties | 13.4 | 13.7 | 13.9 | 11.2 | 7.8 | 6.6 | 11.6 |

Table 10. Number and Per Cent of Dairy Farms by Market Outlet
9 Northeastern Ohio Counties, 1940

| County | Producer | | Fluid to | | For Swiss | | For other | | Butterfat | | Not | | Total | |
|------------|-------------|------|-------------|------|-------------|------|-------------|------|-----------|------|------------|------|--------|-------|
| | Distributor | Pct. | Distributor | Pct. | Manufacture | Pct. | Manufacture | Pct. | No. | Pct. | Classified | Pct. | No. | Pct. |
| | No. | | No. | | No. | | No. | | No. | | No. | | No. | |
| Carroll | 34 | 2.6 | 229 | 17.8 | | | 448 | 34.8 | 525 | 40.7 | 53 | 4.7 | 1,289 | 100.0 |
| Columbiana | 117 | 6.6 | 975 | 55.0 | | | 124 | 7.0 | 492 | 27.8 | 63 | 3.6 | 1,771 | 100.0 |
| Holmes | 16 | 0.9 | 274 | 15.6 | 487 | 27.7 | 232 | 13.2 | 726 | 41.3 | 22 | 1.3 | 1,757 | 100.0 |
| Medina | 39 | 2.3 | 1,207 | 70.5 | | | 94 | 5.5 | 347 | 20.3 | 25 | 1.4 | 1,712 | 100.0 |
| Portage | 43 | 2.7 | 1,202 | 76.1 | 11 | 0.7 | 79 | 5.0 | 194 | 12.3 | 50 | 3.2 | 1,579 | 100.0 |
| Stark | 167 | 7.5 | 1,288 | 57.5 | 91 | 4.0 | 188 | 8.4 | 438 | 19.6 | 68 | 3.0 | 2,240 | 100.0 |
| Summit | 83 | 11.4 | 464 | 64.0 | | | 21 | 2.9 | 119 | 16.4 | 38 | 5.3 | 725 | 100.0 |
| Tuscarawas | 53 | 2.8 | 335 | 17.5 | 490 | 25.7 | 322 | 16.9 | 668 | 35.0 | 40 | 2.1 | 1,908 | 100.0 |
| Wayne | 43 | 1.6 | 1,564 | 56.9 | 14 | 0.5 | 388 | 14.1 | 688 | 25.0 | 52 | 1.9 | 2,749 | 100.0 |
| 9 Counties | 595 | 3.8 | 7,538 | 47.9 | 1,093 | 7.0 | 1,896 | 12.0 | 4,197 | 26.7 | 411 | 2.6 | 15,730 | 100.0 |

Table 11. Number and Per Cent of Milk Cattle by Market Outlet
9 Northeastern Ohio Counties, 1940

| County | Producer | | Fluid to | | For Swiss | | For other | | Butterfat | | Not | | Total | |
|------------|-------------|------|-------------|------|-------------|------|-------------|------|-----------|------|------------|------|---------|-------|
| | Distributor | Pct. | Distributor | Pct. | Manufacture | Pct. | Manufacture | Pct. | No. | Pct. | Classified | Pct. | No. | Pct. |
| | No. | | No. | | No. | | No. | | No. | | No. | | No. | |
| Carroll | 406 | 3.2 | 3,160 | 24.6 | | | 4,627 | 36.0 | 4,360 | 34.0 | 283 | 2.2 | 12,836 | 100.0 |
| Columbiana | 1,379 | 7.1 | 12,761 | 65.7 | | | 1,330 | 6.9 | 3,554 | 18.3 | 405 | 2.0 | 19,429 | 100.0 |
| Holmes | 204 | 1.0 | 4,061 | 19.6 | 6,511 | 31.4 | 2,942 | 14.2 | 6,695 | 32.8 | 207 | 1.0 | 20,720 | 100.0 |
| Medina | 443 | 2.3 | 15,699 | 80.5 | | | 908 | 4.7 | 2,291 | 11.7 | 161 | 0.8 | 19,502 | 100.0 |
| Portage | 640 | 3.0 | 18,041 | 83.3 | 109 | 0.5 | 898 | 4.1 | 1,546 | 7.1 | 442 | 2.0 | 21,676 | 100.0 |
| Stark | 2,105 | 8.3 | 16,604 | 61.7 | 1,097 | 4.3 | 1,975 | 7.8 | 3,087 | 12.2 | 419 | 1.7 | 25,287 | 100.0 |
| Summit | 1,105 | 13.1 | 6,201 | 73.6 | | | 151 | 1.8 | 772 | 9.2 | 195 | 2.3 | 8,424 | 100.0 |
| Tuscarawas | 901 | 4.1 | 5,348 | 24.2 | 7,270 | 32.9 | 3,459 | 15.7 | 4,899 | 22.2 | 207 | 0.9 | 22,084 | 100.0 |
| Wayne | 828 | 2.5 | 21,416 | 64.8 | 175 | 0.5 | 4,860 | 14.7 | 5,377 | 16.3 | 406 | 1.2 | 33,062 | 100.0 |
| 9 Counties | 8,011 | 4.4 | 103,291 | 56.4 | 15,162 | 8.3 | 21,150 | 11.5 | 32,681 | 17.9 | 2,725 | 1.5 | 183,020 | 100.0 |



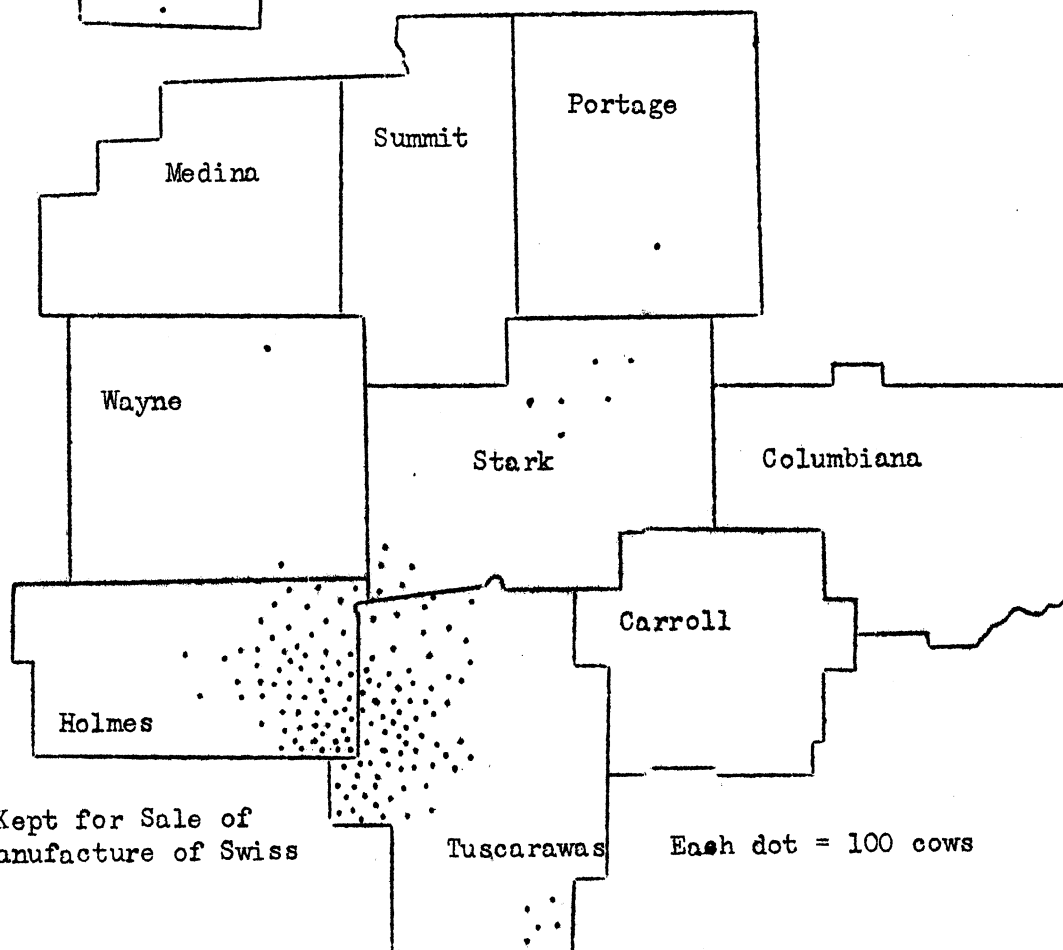
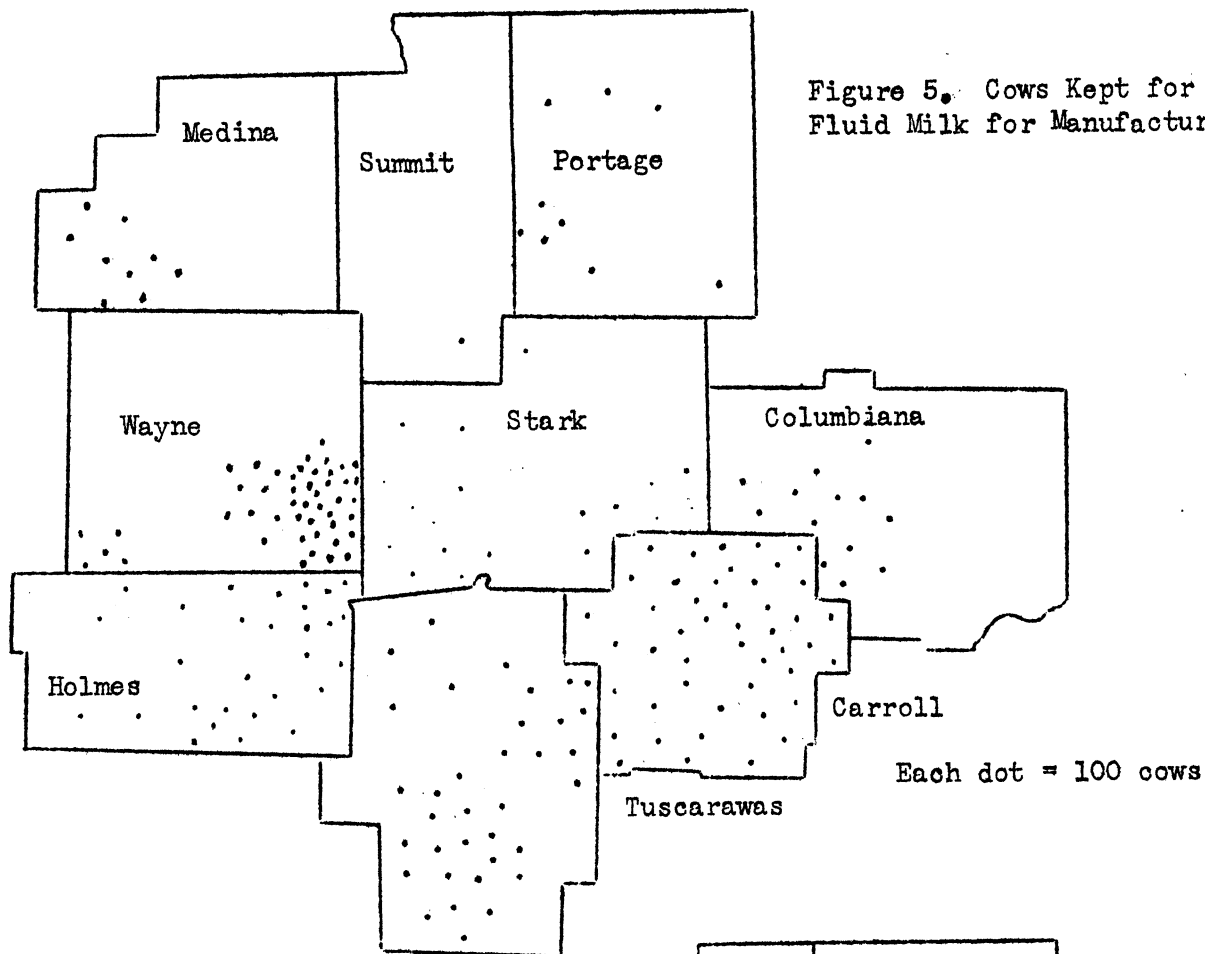


Figure 6. Cows Kept for Sale of Fluid Milk for Manufacture of Swiss Cheese

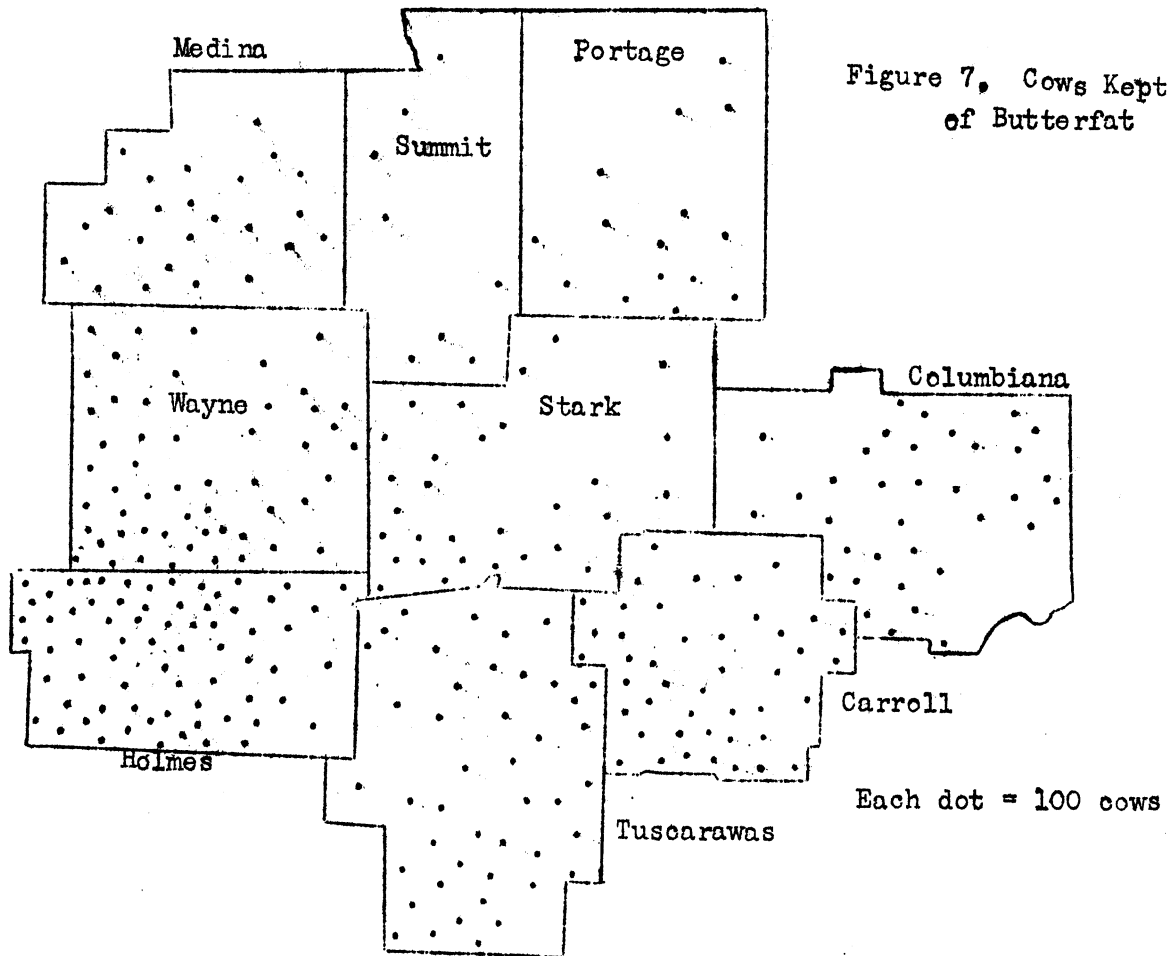


Figure 7. Cows Kept for Sale
of Butterfat

Carroll County

Carroll is not an intensive dairy county. It is one of the smallest of the group and has within its borders no heavy concentration of urban population.

In market outlets the farms were balanced almost evenly between milk for manufacture and butterfat. Of the 229 farms listed as selling to city milk dealers, 75 were in Augusta Township. There were four other townships, Brown, East, Harrison and Washington that had 20 or more farms selling city milk. The city milk farms here as in all the counties studied had the larger dairies. With 17.8 per cent of the farms they accounted for 24.6 per cent of the dairy cattle. The farms selling butterfat had the fewest cows; on 40.7 per cent of the farms there were only 34 per cent of the cattle.

This county, because of the predominance of smaller towns had a relatively large number of producer-distributors. In 1935 there were 31 under license, of which 6 were still operating in 1940. The analysis showed 32 producer-distributors in 1940. Rose and Brown Townships led with 7 each.

The present health commissioner is employed on a part-time basis and there is no regular inspection of the milk supply.

The county had only two plants buying whole milk for manufacture, one at Carrollton and one at Malvern. Distributors and other buyers from Stark and Columbiana Counties serve much of Carroll County.

Milk Distributors

C. R. Herrington, Carrollton
Fred Maple, Carrollton
Harold S. Worlock, Malvern

Manufacturing

Max Radloff Co., Malvern
Windsor Evaporated Milk Co., Carrollton
Carrollton Creamery, Carrollton
Harsh's Home Made Ice Cream

Table 12. Number of Dairy Farms and Milk Cattle,
and Per cent of Each by Market Outlet, Carroll County, 1940

| Township | Total number of farms | Total number of cattle | For fluid | | Fluid for | | Butterfat | | Not | |
|------------|--------------------------------|---------------------------------|-------------|--------|-------------|--------|-----------|--------|------------|--------|
| | | | consumption | | manufacture | | Milk | | classified | |
| | | | Milk | | Milk | | Milk | | Milk | |
| | | | Farms | cattle | Farms | cattle | Farms | cattle | Farms | cattle |
| | | | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) |
| Augusta | 160 | 1686 | 48.1 | 59.8 | 34.4 | 29.9 | 13.1 | 8.4 | 4.4 | 1.9 |
| Brown | 119 | 1118 | 23.5 | 33.6 | 42.0 | 39.1 | 28.6 | 25.1 | 5.9 | 2.2 |
| Center | 55 | 605 | 27.3 | 37.7 | 38.2 | 36.2 | 32.7 | 24.5 | 1.8 | 1.6 |
| East | 72 | 695 | 38.9 | 46.4 | 47.2 | 43.4 | 9.7 | 7.3 | 4.2 | 2.9 |
| Fox | 114 | 1075 | 12.2 | 18.0 | 40.4 | 42.9 | 40.4 | 36.1 | 7.0 | 3.0 |
| Harrison | 104 | 994 | 21.1 | 24.0 | 39.4 | 45.0 | 35.6 | 28.8 | 3.9 | 2.2 |
| Lee | 84 | 666 | 3.6 | 4.3 | 51.2 | 54.3 | 42.8 | 39.5 | 2.4 | 1.9 |
| Louden | 74 | 643 | 8.2 | 9.6 | 29.7 | 36.1 | 56.7 | 51.5 | 5.4 | 2.8 |
| Monroe | 79 | 700 | 7.6 | 8.1 | 20.2 | 30.2 | 67.2 | 56.3 | 5.0 | 5.4 |
| Orange | 71 | 874 | 21.1 | 29.9 | 29.6 | 31.8 | 47.9 | 38.0 | 1.4 | .3 |
| Perry | 98 | 857 | 1.0 | 1.8 | 21.4 | 26.6 | 74.5 | 69.3 | 3.1 | 2.3 |
| Rose | 104 | 1146 | 20.1 | 29.2 | 15.4 | 18.2 | 58.7 | 49.7 | 5.8 | 2.9 |
| Union | 64 | 652 | 10.9 | 17.8 | 21.9 | 28.1 | 65.6 | 53.5 | 1.6 | .6 |
| Washington | 91 | 1125 | 21.9 | 28.9 | 52.7 | 49.4 | 23.2 | 20.5 | 2.2 | 1.2 |
| County | 1289 | 12836 | 20.4 | 27.8 | 34.8 | 36.0 | 40.7 | 34.0 | 4.1 | 2.2 |

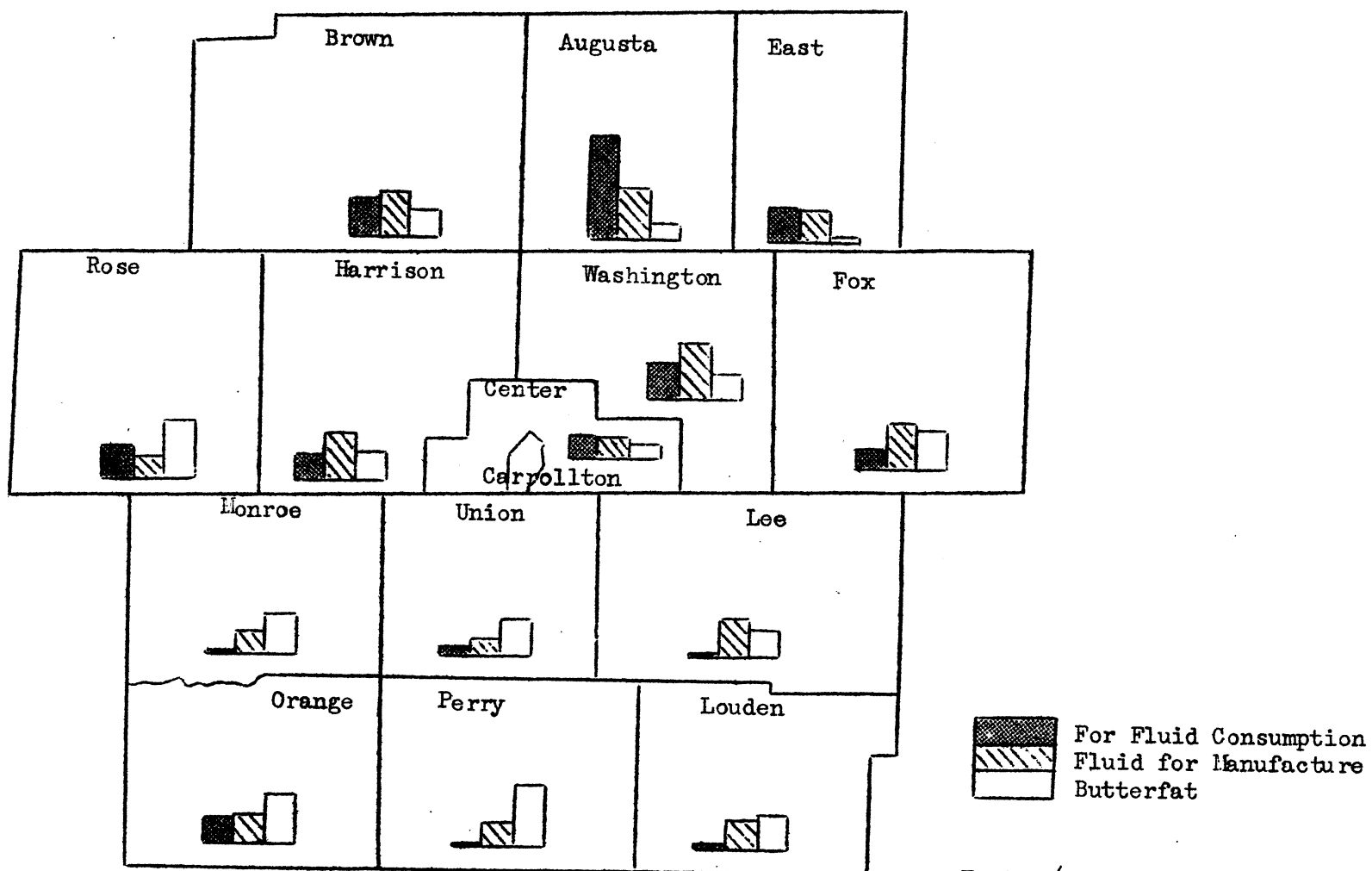


Figure 8. Number of Milk Cattle, by Market Outlet
Carroll County, 1940

Columbiana County

Columbiana County, as shown by this survey was sending more of the milk from its farms into city consumption than into any other outlet. In 1903 it was a manufacturing county. At that time there were 22 Swiss cheese factories and 11 creameries. The cheese factories all gave way to the demand for city milk and local requirements. The five manufacturing plants listed below manufactured some butter and buyers from outside the county purchased the remainder of the butterfat. Some of these manufacturing plants also distributed milk and some of those listed as distributors at times manufactured some dairy products.

This County had the largest mileage of earth roads of the counties in the area as shown in Table 2. This accounted in large measure for the fact that there were three townships, Middleton, Washington and Wayne, in which more than 50 per cent of the farms were selling in the butterfat market. In contrast to these there were six townships, Butler, Fairfield, Knox, Perry, St. Clair and West, in which more than 75 per cent of the farms were in the market for fluid consumption. The sale of milk for manufacture represented only 7 per cent of both farms and cows. In Butler Township there were over a hundred producers selling milk to city dealers who also sold some milk for manufacturing.

Local health officers were on a part-time basis. The towns of East Liverpool and East Palestine had milk regulations.

The distributors and manufacturing plants listed as operating at the time of the survey were:

Distributors

Eckert's Dairy
Wards Guernsey Dairy
Toland H. Zimmerman
Isaly Dairy
Lisbon Dairy Co.
Rosenberg Dairy Co.
Melhorn Dairy Products Co.
Mayflower Dairy Products Co.
Superior Dairy
R. L. Smith
Purity Dairy

Manufacturing Plants

Andalusia Dairy Co.
Famous Dairy
Smith's Creamery
Homeworth Creamery
Golden Star Dairy

Producer-distributors played a very important role in local milk distribution. In 1935 there were 108 licenses issued to producer-distributors under the Burk Act. Of this list 37 were reported as in business in 1940. Those were evidently operating on a commercial scale. The farms averaged 16 cattle tested. In the 1940 survey there were added to this producer-distributor list 64 more farms of which 10 had herds of 15 or more dairy cattle. It was evident that many of the remainder were selling small amounts at the farm or delivering to a few village families.

Table 13. Number of Dairy Farms and Milk Cattle
and Per cent of Each by Market Outlet, Columbiana County, 1940

| Township | Total number of farms | Total number of cattle | For fluid consumption | | Fluid for manufacture | | Butterfat | | Not classified | |
|--------------|--------------------------------|---------------------------------|--------------------------|--------|--------------------------|--------|-----------|--------|-------------------|--------|
| | | | Farms | cattle | Farms | cattle | Farms | cattle | Farms | cattle |
| | | | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) |
| Butler | 164 | 2481 | 93.9 | 95.9 | 1.2 | 1.7 | 1.2 | 2.2 | 3.7 | 3.2 |
| Center | 111 | 1054 | 35.1 | 49.8 | 15.3 | 16.7 | 48.7 | 32.5 | 9.9 | 1.0 |
| Elk Run | 108 | 999 | 63.9 | 74.8 | 1.9 | 1.8 | 30.5 | 21.2 | 3.7 | 2.2 |
| Fairfield | 143 | 1421 | 76.9 | 83.0 | -- | -- | 17.5 | 13.8 | 5.6 | 3.2 |
| Franklin | 79 | 846 | 22.7 | 31.4 | 36.7 | 36.4 | 36.7 | 30.0 | 3.9 | 2.2 |
| Hanover | 129 | 1478 | 45.0 | 52.8 | 28.7 | 25.6 | 24.0 | 20.2 | 2.3 | 1.4 |
| Knox | 185 | 2225 | 86.5 | 92.3 | .6 | 4.7 | 9.7 | 4.4 | 3.2 | 2.6 |
| Liverpool | 24 | 181 | 70.8 | 86.8 | -- | -- | 12.5 | 6.6 | 16.7 | 6.6 |
| Madison | 93 | 882 | 71.0 | 85.4 | -- | -- | 23.7 | 12.2 | 5.3 | 2.4 |
| Middleton | 112 | 867 | 35.7 | 46.0 | 1.8 | 1.3 | 56.3 | 49.6 | 6.2 | 3.1 |
| Perry | 47 | 635 | 95.8 | 97.8 | 2.1 | 1.4 | 2.1 | 7.8 | -- | -- |
| Salem | 132 | 1467 | 44.0 | 59.2 | 5.3 | 7.1 | 46.2 | 31.3 | 4.5 | 2.4 |
| St. Clair | 46 | 666 | 89.1 | 95.3 | -- | -- | 6.5 | 3.3 | 4.4 | 1.4 |
| Unity | 113 | 1237 | 61.0 | 71.3 | 2.7 | 2.9 | 32.7 | 23.4 | 3.6 | 2.4 |
| Washington | 59 | 393 | 27.1 | 29.5 | -- | -- | 66.1 | 65.1 | 6.8 | 5.4 |
| Warne | 56 | 492 | 10.7 | 19.3 | 8.9 | 12.8 | 80.4 | 67.9 | -- | -- |
| West | 133 | 1729 | 76.7 | 80.8 | 13.5 | 11.6 | 9.8 | 7.6 | -- | -- |
| Yellow Creek | 37 | 376 | 64.9 | 75.0 | -- | -- | 35.1 | 25.0 | -- | -- |
| County | 1771 | 19429 | 61.6 | 72.8 | 7.0 | 6.9 | 27.8 | 18.3 | 3.6 | 2.0 |

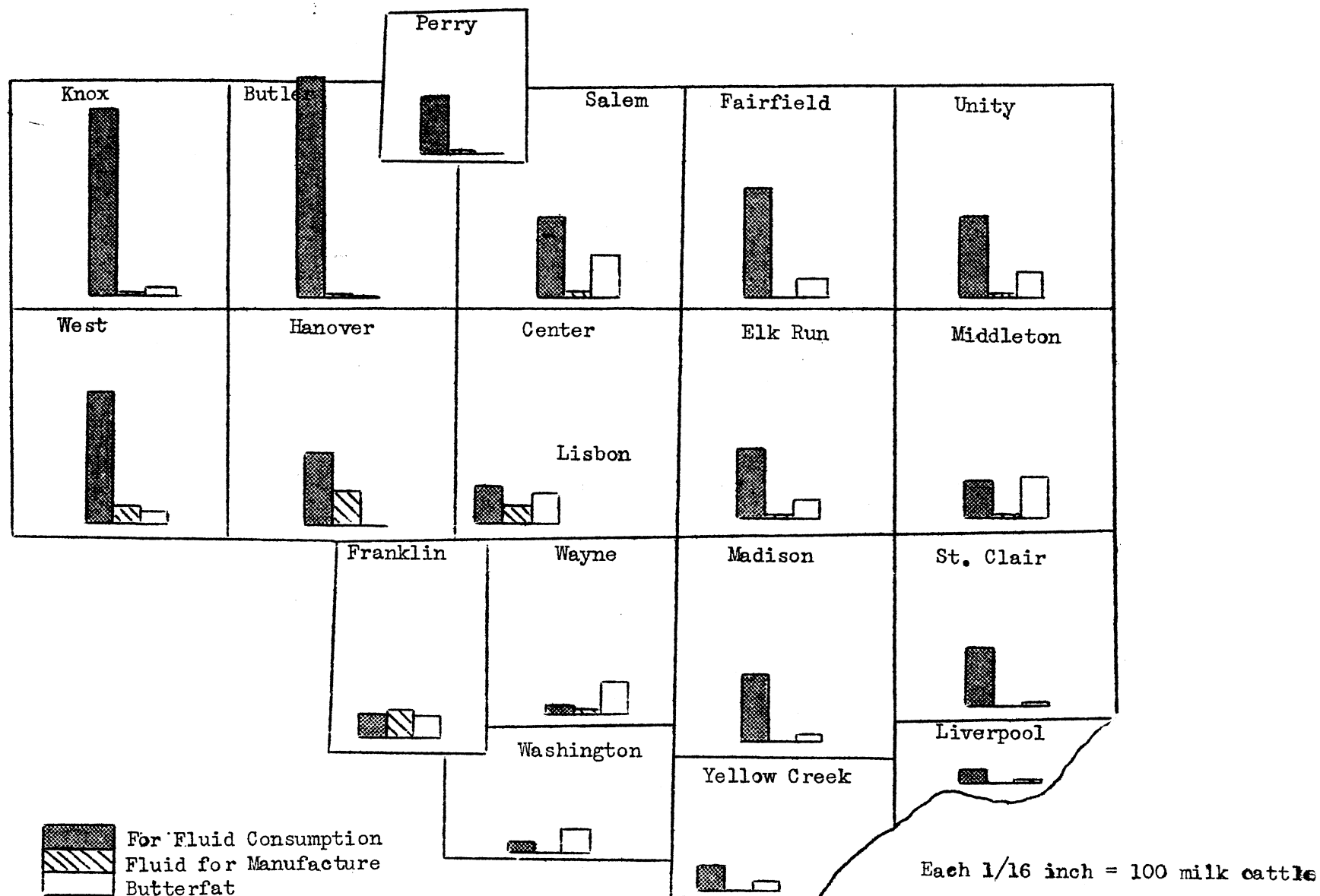


Figure 9. Number of Milk Cattle, by Market Outlet, Columbiana County, 1940

Holmes County

Geographic location with respect to city markets, topography and the background of the rural population combine to give Holmes County a rating high in manufacturing outlets and low in milk for fluid consumption.

The county is for the most part rolling or hilly, and on January 1, 1940 the highway records showed that it had 42 per cent earth roads.

In classifying the farms in Holmes, Tuscarawas, Portage, Wayne and Stark Counties a separate grouping for Swiss cheese was made. In many instances part of the milk, generally known as base milk, was going into a city outlet and the excess to a cheese factory. In some cases this excess overbase was going a part of the year to one and a part to the other outlet. In these cases the farms were classified as city milk because this was considered the principal outlet.

Table 11 shows that milk from 27.7 per cent of the farms and 31.4 per cent of the cattle were going exclusively into the Swiss cheese classification. When combined with milk for fluid manufacture these two outlets accounted for approximately 41 per cent of the farms or the same per cent as were going into the butterfat market. It is significant, however, that the farms selling to Swiss cheese factories had large herds on the average. In this respect they ranked with farms going to city milk outlets. The farms selling butterfat included, as usual, the smaller herds; 41.3 per cent of the farms, but only 32.8 per cent of the milk cattle were in this group.

Tables 6 and 7 show that the county had more cheese factories in 1940 than it had in 1903. The Orrville Milk Condensing Company operated a combination plant at Trail, equipped to make Swiss cheese or collect and cool whole milk for transportation in tank trucks to the condensing plant at Orrville. The shippers going to this plant were under Cleveland inspection at the time of the survey.

The health district included both the county and Millersburg. There were milk regulations.

The plants listed as operating in the county were:

Distributors

W. G. Mote & Sons
Oscar Boyd
Snow Dairy

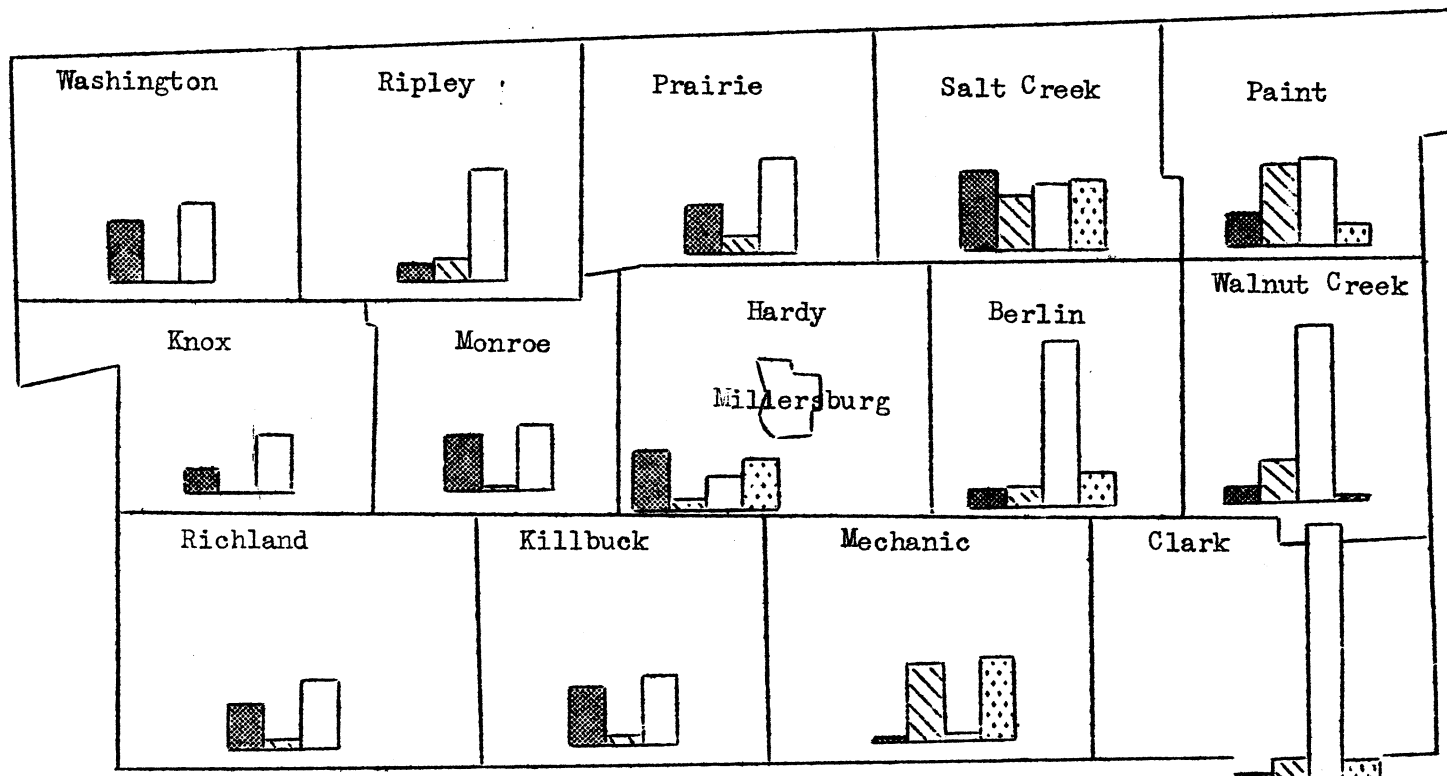
Manufacturers

| | |
|----------------------------|------------------------------|
| Millersburg Creamery | Butter |
| Trail Plant | Swiss cheese, condensed milk |
| Farmerstown Cheese Co. | Swiss Cheese |
| Charm Cheese Co. | " " |
| Ashery Dairy | " " |
| Bunker Hill Cheese Factory | " " |
| Miller Cheese Co. | " " |
| Sharp Run Dairy | " " |
| Gerber Valley Cheese Co. | " " |
| Mast Dairy | " " |
| Alpine Cheese Co. | " " |
| Pleasant View Cheese Co. | " " |
| Union Cheese Co. | " " |

Distribution locally by producer-distributors was important. There were 20 licensed in 1935 and of these 6 were operating in 1940. Nine new names were added to the list in the survey. Three of these farms had herds in excess of 15 cattle.

Table 14. Number of Dairy Farms and Milk Cattle
and per cent of each by Market Outlet, Holmes County, 1940

| Township | Total number of farms | Total number of milk cattle | For fluid consumption | | Fluid for manufacture | | Swiss cheese | | Butterfat | | Not classified | |
|--------------|--------------------------------|--------------------------------------|--------------------------|--------|--------------------------|--------|--------------|--------|-----------|--------|-------------------|--------|
| | | | Milk | | Milk | | Milk | | Milk | | Milk | |
| | | | Farms | cattle | Farms | cattle | Farms | cattle | Farms | cattle | Farms | cattle |
| | | | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) |
| Berlin | 142 | 1952 | 5.6 | 7.8 | 6.4 | 8.3 | 67.6 | 69.7 | 19.0 | 13.2 | 1.4 | 1.0 |
| Clark | 193 | 2427 | 1.0 | 1.3 | 5.7 | 6.3 | 82.9 | 86.4 | 10.4 | 6.0 | -- | -- |
| Hardy | 117 | 1321 | 27.3 | 37.4 | 6.0 | 7.3 | 22.2 | 22.2 | 43.6 | 32.1 | .9 | 1.0 |
| Killbuck | 91 | 1146 | 27.5 | 42.2 | 5.5 | 6.1 | -- | -- | 64.8 | 50.7 | 2.2 | 1.0 |
| Knox | 62 | 667 | 25.8 | 29.5 | -- | -- | -- | -- | 71.0 | 69.6 | 3.2 | .9 |
| Mechanis | 126 | 1415 | 1.6 | .9 | 38.1 | 45.2 | 4.0 | 5.0 | 56.3 | 48.9 | -- | -- |
| Monroe | 99 | 1034 | 32.4 | 44.2 | 1.0 | .9 | -- | -- | 63.6 | 51.0 | 3.0 | 3.9 |
| Paint | 148 | 1890 | 13.5 | 14.0 | 35.1 | 35.4 | 36.5 | 38.0 | 12.2 | 9.6 | 2.7 | 3.0 |
| Prairie | 107 | 1301 | 24.3 | 30.5 | 10.3 | 10.4 | -- | -- | 65.4 | 59.1 | -- | -- |
| Richland | 99 | 1017 | 24.2 | 36.5 | 7.1 | 7.5 | -- | -- | 68.7 | 56.0 | -- | -- |
| Ripley | 135 | 1248 | 8.8 | 11.2 | 16.3 | 13.7 | -- | -- | 71.9 | 73.0 | 3.0 | 2.1 |
| Salt Creek | 177 | 2166 | 26.0 | 29.4 | 16.4 | 20.2 | 23.2 | 24.3 | 34.4 | 26.1 | -- | -- |
| Walnut Creek | 149 | 1955 | 5.4 | 6.4 | 20.1 | 16.4 | 70.5 | 74.0 | 2.7 | 2.7 | 1.3 | .5 |
| Washington | 112 | 1181 | 33.0 | 42.5 | -- | -- | -- | -- | 65.2 | 55.4 | 1.8 | 2.1 |
| County | 1757 | 20720 | 16.5 | 20.6 | 13.2 | 14.2 | 27.7 | 31.4 | 41.3 | 32.8 | 1.3 | 1.0 |





 For Fluid Consumption
 Fluid for Manufacture
 Butterfat
 Swiss Cheese

Figure 10. Number of Milk Cattle, by Market Outlet,
Holmes County, 1940

Medina County

This county has an ideal location to enable all milk producers who so desire to have a city milk market outlet. The county is within easy access by truck to either Cleveland or Akron. Hard surface and gravel constituted 90 per cent of the total public road mileage in 1940. The county is well adapted to dairying.

In the survey 72.8 per cent of the farms and 82.8 per cent of the cattle recorded were in the fluid consumption outlet. Of 19,502 cattle listed, 908 were credited to milk for manufacture and of these, 492 were located in Harrisville Township, the site of the Lodi milk plant. There were 347 farms selling butterfat scattered through all the townships of the county. There were but three townships in which less than 75 per cent of the cattle were listed as in the city milk market.

Cleveland was in 1940 the dominant market drawing from the county. The survey by McBride and Cowden in 1931 (see page 7) showed 1116 farms under Cleveland and 405 under Akron inspection. In 1930 the Milk Producers Association of Summit County and Vicinity serving the Akron market had 400 members in Medina County. In 1940 it had 167. During this period there were several milk truck routes transferred from the Akron to the Cleveland market.

The county was served by a full-time health department. The administration for Wadsworth was combined with the county on a contract basis. Milk regulations were in effect.

The dairy plants listed in 1940 were:

Distributors

| | |
|-----------------|-----------------|
| Hatch Dairy Co. | Carl Zimmerman |
| Isaly Dairy | Frank Ridiker |
| Mantz Dairy | Spencer Dairy |
| John Millert | V. A. Homan Co. |
| Smith Dairy | H. & H. Dairy |
| Elm Farm Dairy | |

Manufacturers

| |
|---------------------------|
| United Dairy Co. |
| Tebbits Ice Cream Company |

Producer-distributors occupy a position of considerable importance in local milk distribution. In 1935 there were 20 producer-distributors under license. In 1940 there were 7 of these reported by the Board of Health and by those who checked our lists as still operating. In addition there were 55 more reported who were not licensed in 1935. Of these approximately 50 per cent were farms with 3 to 9 cows selling to a few people at the farm. This seems to indicate a substantial increase of farms in the past five years selling in this type of outlet.

Table 15. Number of Dairy Farms and Milk Cattle
and Per cent of Each by Market Outlet, Medina County, 1940

| Township | Total number of farms | Total number of milk cattle | For fluid consumption | | Fluid for manufacture | | Butterfat | | Not classified | |
|-------------|--------------------------------|--------------------------------------|--------------------------|--------|--------------------------|--------|-----------|--------|-------------------|--------|
| | | | Milk | | Milk | | Milk | | Milk | |
| | | | Farms | cattle | Farms | cattle | Farms | cattle | Farms | cattle |
| | | | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) |
| Brunswick | 70 | 627 | 61.5 | 75.6 | -- | -- | 32.8 | 20.4 | 5.7 | 4.0 |
| Chatham | 89 | 824 | 43.8 | 55.1 | 11.2 | 10.3 | 42.6 | 31.8 | 2.4 | 2.8 |
| Granger | 90 | 1078 | 90.0 | 93.7 | -- | -- | 10.0 | 6.3 | -- | -- |
| Guilford | 133 | 1515 | 88.0 | 93.7 | -- | -- | 9.0 | 4.7 | 3.0 | 1.6 |
| Harrisville | 111 | 1125 | 27.0 | 41.6 | 50.5 | 43.8 | 22.5 | 14.6 | -- | -- |
| Hinckley | 66 | 729 | 87.9 | 95.0 | 3.0 | 1.1 | 9.1 | 3.9 | -- | -- |
| Homer | 105 | 1136 | 78.2 | 81.5 | .9 | .9 | 20.9 | 17.6 | -- | -- |
| Lafayette | 130 | 1208 | 50.7 | 70.4 | .7 | .5 | 47.0 | 27.9 | 1.6 | 1.2 |
| Litchfield | 94 | 1120 | 67.0 | 82.9 | 1.1 | .8 | 30.8 | 15.6 | 1.1 | .7 |
| Liverpool | 110 | 1301 | 90.1 | 95.9 | .9 | .2 | 4.5 | 2.1 | 4.5 | 1.8 |
| Medina | 109 | 1167 | 79.8 | 86.3 | -- | -- | 20.2 | 13.7 | -- | -- |
| Montville | 87 | 1029 | 77.0 | 86.5 | 4.6 | 3.0 | 15.0 | 8.6 | 3.4 | 1.9 |
| Sharon | 119 | 1372 | 74.0 | 82.7 | -- | -- | 26.0 | 17.3 | -- | -- |
| Spencer | 87 | 1229 | 66.7 | 76.6 | 16.1 | 15.2 | 17.2 | 8.2 | -- | -- |
| Wadsworth | 114 | 1321 | 90.4 | 95.0 | .8 | 1.2 | 8.8 | 3.8 | -- | -- |
| Westfield | 103 | 1254 | 81.6 | 85.8 | 2.9 | 4.9 | 12.6 | 8.0 | 2.9 | 1.3 |
| York | 95 | 1467 | 85.3 | 93.2 | -- | -- | 13.7 | 6.3 | 1.0 | .5 |
| County | 1712 | 19502 | 72.8 | 82.8 | 5.5 | 4.7 | 20.3 | 11.7 | 1.4 | .8 |



For Fluid Consumption
Fluid for Manufacture
Butterfat

Each 1/6 inch = 100 milk cattle

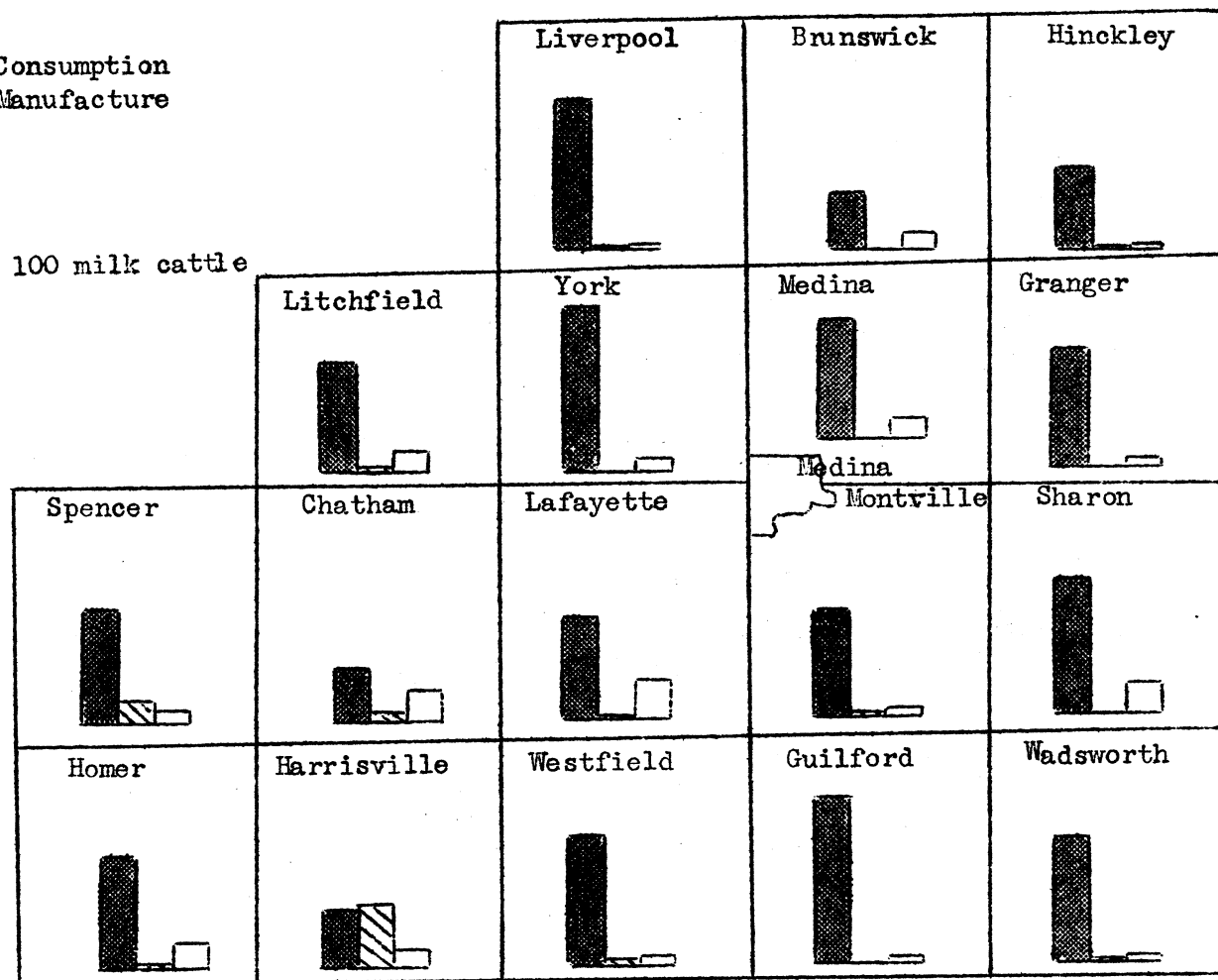


Figure 11. Number of Milk Cattle, by Market Outlet,
Medina County, 1940

Portage County

Portage County is similar to Summit in many respects. Its dairy production and marketing is closely tied up with the city of Akron. The county increased in number of farms from 2766 in 1930 to 3369 in 1940. Many of the smaller farms were occupied by part time farmers. The urban population within the county was small. In 1940 the population of the two cities were Kent 8566 and Ravenna 8445.

The percentage of farms listed as in the market for fluid consumption was 78.8 and the percentage of cows 86.3. This was highest of the nine counties. Aurora and Paris Townships had 100 per cent of the farms reported in this outlet.

The producers selling into the Akron market were practically all members of the Milk Producers Association of Summit County and Vicinity. This association is discussed in the section of Summit County. About 100 producers in the county sold their milk to the condensery of the United Milk Products Company at Kent. This was a Cleveland concern and the shippers were under Cleveland inspection.

The dairy production and marketing pattern of the county will be affected by the construction of a large munitions plant near Ravenna. Some dairy farms were absorbed in this site and others were vitally affected by the demand for labor. The milk supply needed for the increased population will probably come in large measure from the present Akron milk shed if the sanitary requirements are met.

Portage County has a full time health department, but does not have milk regulations. Ravenna and Kent are on a part time basis and also without a set of milk regulations.

Distributors

Fenn Dairy, Kent
 Roher Dairy, Kent
 Kent Sanitary Dairy, Kent
 The Perfection Dairy Co.
 United Milk Products Co.
 Harlan Dale Farms, Ravenna
 Vale Edge Dairy, Ravenna
 Krueger's Dairy, Ravenna
 Maple Crest Farm Dairy, Tallmadge

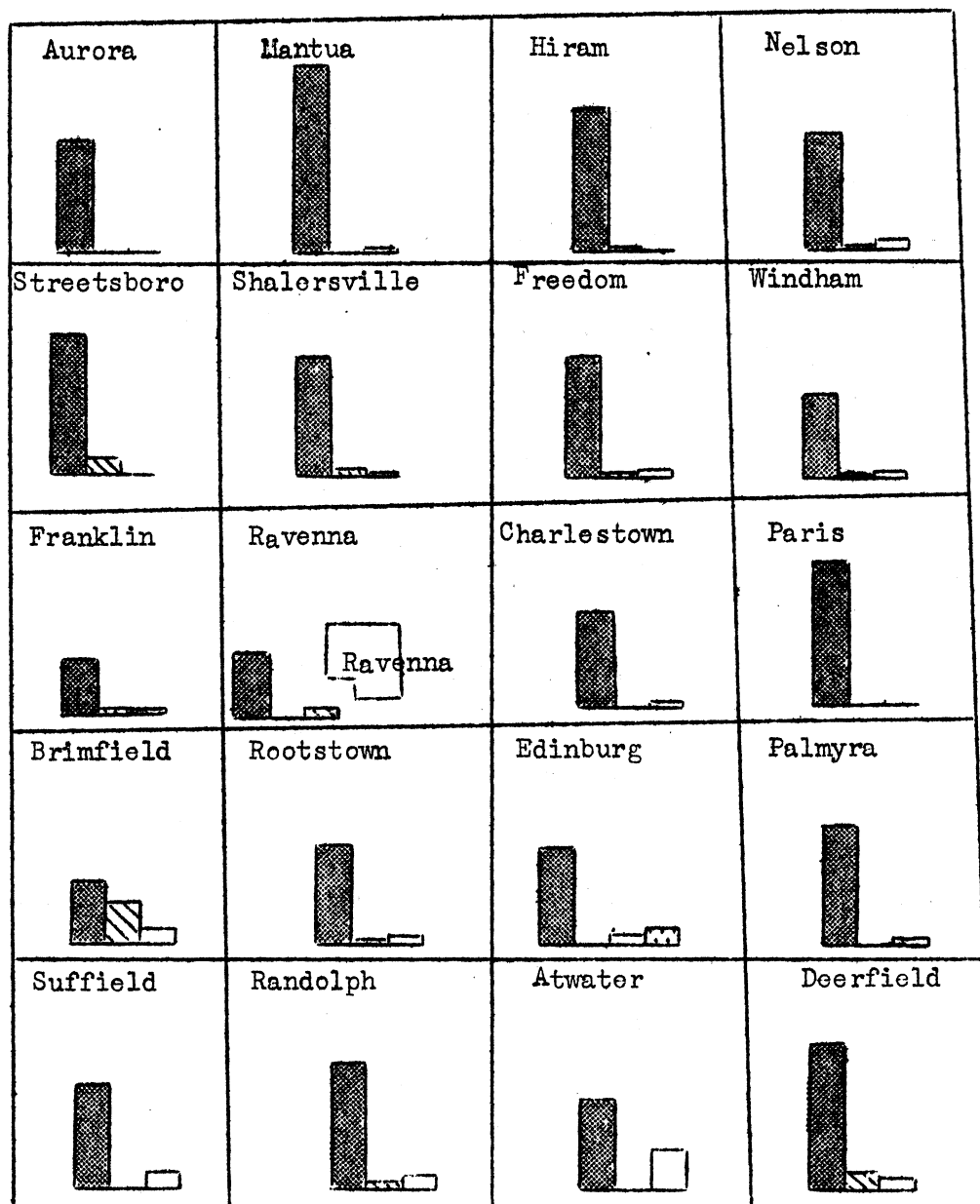
Manufacturing Plant

United Milk Products Co.

Producer-distributors were responsible for much of the local milk sales. There were 44 licensed in 1935. Of these 9 were found to be operating in 1940. Reporters added 26 new names to the list in 1940. This indicates that in numbers, producer-distributors have declined slightly in the past 5 years.

Table 16. Number of Dairy Farms and Milk Cattle
and Per cent of Each by Market Outlet, Portage County, 1940

| Township | Total number of farms | Total number of milk cattle | For fluid | | Fluid for | | Swiss cheese | | Butterfat | | Not | |
|-------------|--------------------------------|--------------------------------------|-------------|--------|-------------|--------|--------------|--------|-----------|--------|------------|--------|
| | | | consumption | | manufacture | | Milk | | Milk | | classified | |
| | | | Farms | cattle | Farms | cattle | Farms | cattle | Farms | cattle | Farms | cattle |
| | | | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) |
| Atwater | 81 | 1076 | 55.6 | 68.6 | -- | -- | -- | -- | 43.2 | 30.0 | 1.2 | 1.4 |
| Aurora | 43 | 851 | 100.0 | 100.0 | -- | -- | -- | -- | -- | -- | -- | -- |
| Brimfield | 81 | 1025 | 39.5 | 51.3 | 37.0 | 34.4 | -- | -- | 21.0 | 13.1 | 2.5 | 1.2 |
| Charlestown | 69 | 860 | 94.2 | 95.1 | -- | -- | -- | -- | 4.3 | 4.4 | 1.5 | .5 |
| Deerfield | 98 | 1452 | 76.5 | 85.3 | 11.2 | 8.7 | -- | -- | 10.2 | 5.0 | 2.1 | 1.0 |
| Edinburg | 94 | 1118 | 65.9 | 75.2 | -- | -- | 11.7 | 9.8 | 21.3 | 14.4 | 1.1 | 1.6 |
| Franklin | 38 | 517 | 86.8 | 90.5 | 2.6 | 3.7 | -- | -- | 5.3 | 3.1 | 5.3 | 2.7 |
| Freedom | 93 | 1184 | 81.7 | 85.8 | 5.4 | 5.4 | -- | -- | 9.7 | 6.3 | 3.2 | 2.5 |
| Hiram | 84 | 1308 | 89.2 | 95.0 | 3.7 | 1.3 | -- | -- | -- | -- | 7.1 | 3.7 |
| Mantua | 82 | 1613 | 93.9 | 97.5 | -- | -- | -- | -- | 4.9 | 1.6 | 1.2 | .9 |
| Nelson | 92 | 1152 | 77.1 | 85.6 | 3.3 | 2.8 | -- | -- | 15.2 | 9.2 | 4.4 | 2.4 |
| Palmyra | 82 | 1092 | 84.2 | 91.5 | -- | -- | -- | -- | 14.7 | 7.4 | 1.1 | 1.1 |
| Paris | 77 | 1187 | 100.0 | 100.0 | -- | -- | -- | -- | -- | -- | -- | -- |
| Randolph | 126 | 1272 | 79.4 | 84.5 | 5.5 | 4.8 | -- | -- | 14.3 | 10.1 | .8 | .6 |
| Ravenna | 50 | 713 | 66.0 | 78.7 | -- | -- | -- | -- | 22.0 | 11.9 | 12.0 | 9.4 |
| Rootstown | 79 | 926 | 73.6 | 84.3 | 2.5 | 2.4 | -- | -- | 13.9 | 7.7 | 10.0 | 5.6 |
| Shalerville | 82 | 1174 | 79.2 | 85.2 | 8.5 | 5.9 | -- | -- | 2.5 | 2.2 | 9.8 | 6.7 |
| Streetsboro | 72 | 1307 | 86.1 | 88.6 | 12.5 | 10.1 | -- | -- | -- | -- | 1.4 | 1.3 |
| Suffield | 92 | 1024 | 79.4 | 85.7 | -- | -- | -- | -- | 20.6 | 14.3 | -- | -- |
| Windham | 64 | 765 | 84.4 | 90.3 | 1.6 | 1.8 | -- | -- | 10.9 | 6.7 | 3.1 | 1.2 |
| County | 1579 | 21676 | 78.8 | 86.3 | 5.0 | 4.1 | .7 | .5 | 12.3 | 7.1 | 3.2 | 2.0 |



For Fluid Consumption
Fluid for Manufacture
Butterfat
Swiss Cheese

Each 1/16 inch = 100 milk cattle

Figure 12. Number of Milk Cattle, by Market Outlet
Portage County, 1940

Stark County

Stark was one of the most important counties in the area in whole milk sales. In number of farms selling whole milk it ranks within the first five counties in the entire state. The county has a large consuming population centering in the cities of Canton, Massillon and Alliance.

There has been an interesting evolution in the county with respect to dairy production and marketing. In the American cheese making period around 1875 to 1910, millions of pounds of cheese were purchased by the Martig Cheese Company at Louisville, and by other buyers. Later the eastern part of Stark County was included in a Swiss cheese area that in 1903 consisted of 46 factories in Stark, Mahoning and Columbiana Counties.

Shortly after the turn of the century conditions began to change, and with the rapid growth of the cities of Canton, Massillon and Alliance, more farms were needed for milk for fresh milk and cream supplies. This development came first in the central and western parts of the county around Canton and Massillon. The Swiss cheese factories in the eastern part of the county remained for some time, but did not survive the period of the first World War when the demand for milk for evaporating grew very rapidly. The Supreme Dairy at Alliance became a manufacturing outlet for a large number of farms.

Cooperative marketing of dairy products has gone through some significant developments in the county. Many of the early cheese factories were cooperative. The marketing of city milk on a cooperative basis had its beginnings in 1912, when 103 of the producers selling to the Sanitary Milk Company met and formed the Stark County Milk Producers Association. Later in the spring of 1913, 43 other dairy farmers, patrons of other milk distributors joined the movement. These 146 members were approximately the total number of shippers to the Canton market at that date.

The Association has grown consistently since its beginning. The classification plan of selling milk was inaugurated in 1919. In 1921 an expansion program began to take hold. The Dairy Council program was approved and \$1500 was appropriated for a sales promotion campaign. Producers in the Alliance and Massillon areas were invited to join the association. At this same time a committee was appointed to consult with the Canton Board of Health with respect to inspection for producers in Carroll and Tuscarawas Counties. It was also decided that an investigation should be made regarding the possibility of making cheese and a committee was appointed for that purpose.

The real expansion came a few years later. In 1926 the Association was incorporated under the Ohio Cooperative Law. The Massillon territory was actually granted membership in the Association in 1928, and the Alliance territory in 1929. In 1937 the Association acquired the Brewster Dairy Products Company and its stockholders were admitted as members.

In 1940 the Association had approximately 1100 members. It received and marketed for its members 60,887,495 pounds of milk, of which 27,876,339 pounds, or 45.8 per cent, was sold as Class I for fluid use.

Stark County had a unique marketing agency in the Stark County Milk Marketing Board. It was incorporated in 1936. Its function was to manage and audit the market pool and to put into effect the regulations and methods adopted by the dealers and the cooperative association. It had six

trustees, three of whom were chosen by the Stark County Milk Producers Association and three by the Stark County Milk Distributors Association. During the operating year December 1, 1939 to November 30, 1940 there were 28 milk distributors who participated in the market pool. 60,887,497 pounds of milk were received from a monthly average of 985 producers. The value of the milk pooled at the established classification prices was \$1,075,384.42.

The analysis of farms by market outlets is shown in Table 10. From this it is evident that milk for fluid consumption was the dominant outlet. For the county as a whole, 65 per cent of the farms, and 74 per cent of the milk cattle were required for this use. There were only three townships, Bethlehem, Pike and Sugar Creek, in which less than half the farms were in this classification, and of these, only Sugar Creek had less than 50 per cent of the cows so classified. Butterfat follows milk for fluid consumption, both as to number of farms, 19.6 per cent, and number of milk cattle, 12.0 per cent. The wide difference in the percentages of farms and cows is evidence that many of the smaller farms are in the butterfat market.

Milk Distributors

| | |
|------------------------|-------------------------|
| Sanitary Milk Co. | Ideal Dairy |
| Lesh Himes Milk Co. | Brookfield Dairy |
| Crider's Dairy | Dan Keller Dairy |
| Canton Pure Milk Co. | J. M. Storek Dairy |
| Wylar Bros. Dairy | Massillon Pure Milk Co. |
| Floom Purity Dairy | Walter Battershell |
| Superior Dairy | North Canton Dairies |
| Wm. H. Snyder Dairy | Isaly Dairy Co. |
| Acme Dairy Products | (2 stores) |
| West Side Dairy | Bircher's Farm Dairy |
| Lippincott's Dairy | City Dairy |
| Schmachtenberger Dairy | Miller's Dairy |
| Eckert's Dairy | Sterling Dairy Co. |
| Supreme Dairy Co. | Rue Burnell Dairy |
| Sunnyside Dairy | Orchard Hill Dairy |
| Denny Bros. Dairy | Grandview Dairy |
| Hol-Guerns Dairy | Quality Dairy |
| Orchard Grove Dairy | Anglemont Dairy |
| Burger's Dairy | City View Dairy |
| Globe Dairy | City Dairy |
| Oberlin Dairy | Reinhart Dairy |

Manufacturing Plants

| | |
|-----------------------------------|-----------------|
| Noacker Ice Cream Co., Canton | Ice Cream |
| Davis Ice Cream Co., Massillon | " " |
| Maple Crest Creamery, Canton | Butter |
| Smith Ave. Creamery, Canton | " |
| Janson Creamery, Canton | " |
| Daily Maid, Canton | " |
| Meadow Brook Butter Co., Alliance | " |
| Millers Home Dairy, Uniontown | " |
| Minerva Pure Milk Co., Minerva | American cheese |
| Max Radloff Co., Malvery | " " |

Carl Tanner and Co., Alliance
 Yoder Dairy Co., Beach City
 Canal Fulton Cheese Factory, Canal Fulton
 East Canton Cheese Co., E. Canton
 Marlboro Cheese Co., Hartville
 F. Berger Factory, Maximo
 F. Madron, Maximo
 Farmers Co-op, Cheese Co., Middlebranch
 Fred Dahler Cheese Co., N. Canton

Swiss cheese

" "
 " "
 " "
 " "
 " "
 " "
 " "

Lyons Dairy, Alliance
 Brewster Dairy Products Co., Brewster

Butter, Ice Cream

Ice Cream, Swiss cheese

In this county there were many producers selling milk for Swiss cheese during the surplus season, and to dealers for use in fluid consumption the remainder of the year. For this study these producers were placed in the fluid milk outlet class as they were prepared to sell milk in this way whenever needed. Other producers sold to Swiss cheese factories and other manufacturing outlets. In this case the producers were included in the column headed "Fluid for Manufacture". As a result of this method of classification the number of producers selling milk for Swiss cheese manufacture is not an exact picture of the amount of milk going into this channel. It is the result of classifying each producer in the highest return class for which he is qualified.

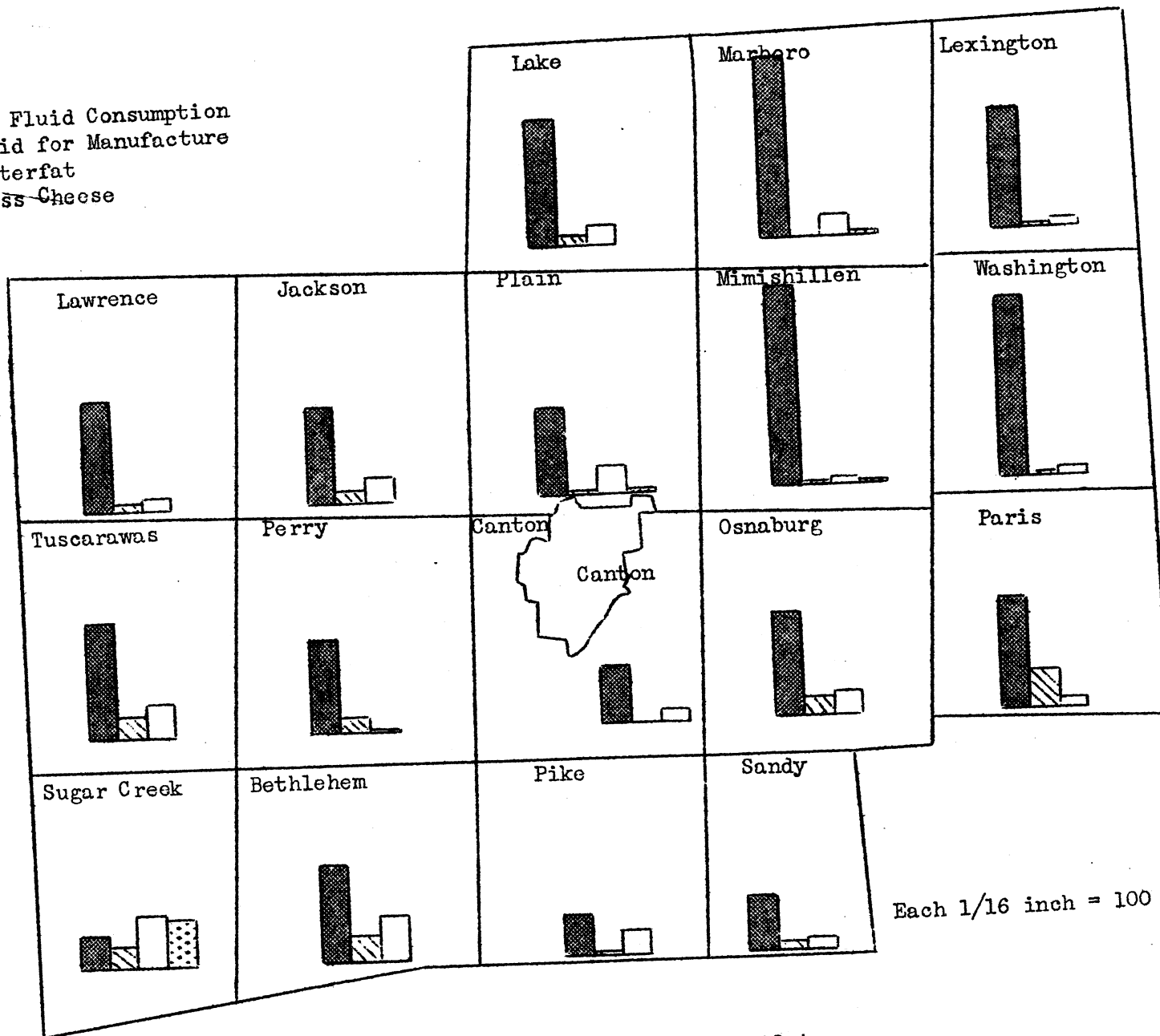
The producer-distributor situation presents an interesting evolution in Stark County in the past five years. Under the Burk Act in 1935 there were 106 licenses issued to producer-distributors. Of these 40 were operating at the time of the survey in 1940. Those who checked the lists in the survey added 146 farms that were selling to consumers in addition to the 40 that remained in during the five year period. Of the 188 farms in this classification 75 were credited with 15 or more cows in the testing records.

Table 17. Number of Dairy Farms and Milk Cattle
and Per cent of Each by Market Outlet, Stark County, 1940

| Township | Total number of farms | Total number of milk cattle | For fluid consumption | | Fluid for manufacture | | Swiss cheese | | Butterfat | | Not classified | |
|-------------|--------------------------------|--------------------------------------|--------------------------|--------|--------------------------|--------|--------------|--------|-----------|--------|-------------------|--------|
| | | | Milk | | Milk | | Milk | | Milk | | Milk | |
| | | | Farms | cattle | Farms | cattle | Farms | cattle | Farms | cattle | Farms | cattle |
| | | | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) |
| Bethlehem | 168 | 1799 | 46.5 | 56.4 | 16.0 | 16.0 | -- | -- | 35.1 | 26.4 | 2.4 | 1.2 |
| Canton | 59 | 712 | 74.6 | 81.2 | -- | -- | -- | -- | 25.4 | 18.8 | -- | -- |
| Jackson | 144 | 1424 | 57.6 | 71.7 | 9.7 | 8.3 | -- | -- | 29.2 | 17.5 | 3.5 | 2.5 |
| Lake | 158 | 1749 | 67.7 | 77.5 | 6.3 | 7.0 | -- | -- | 22.8 | 12.5 | 3.2 | 3.0 |
| Lawrence | 127 | 1447 | 74.0 | 81.6 | 6.3 | 6.2 | -- | -- | 17.3 | 11.1 | 2.4 | 1.1 |
| Lexington | 97 | 1245 | 84.6 | 90.8 | 1.0 | 0.6 | -- | -- | 9.3 | 6.7 | 5.1 | 1.9 |
| Marlboro | 164 | 2183 | 83.0 | 87.0 | -- | -- | 11.0 | 9.9 | 3.0 | 1.6 | 3.0 | 1.5 |
| Nimishillen | 187 | 2216 | 88.2 | 92.3 | 0.6 | 0.5 | 3.2 | 3.2 | 2.7 | 1.1 | 5.3 | 2.9 |
| Osnaburg | 150 | 1565 | 59.4 | 69.2 | 13.3 | 11.9 | -- | -- | 21.3 | 15.3 | 6.0 | 3.6 |
| Paris | 159 | 1643 | 58.5 | 69.2 | 25.1 | 23.2 | -- | -- | 12.7 | 6.0 | 3.7 | 1.6 |
| Perry | 82 | 1112 | 87.8 | 85.3 | 9.8 | 13.5 | -- | -- | 2.4 | 1.2 | -- | -- |
| Pike | 71 | 699 | 45.2 | 61.5 | 2.8 | 2.7 | -- | -- | 50.9 | 34.8 | 1.1 | 1.0 |
| Plain | 100 | 1252 | 61.0 | 71.6 | 4.0 | 2.0 | 23.0 | 22.3 | 7.0 | 2.5 | 5.0 | 1.6 |
| Sandy | 64 | 800 | 62.5 | 71.4 | 14.0 | 13.1 | -- | -- | 23.5 | 15.5 | -- | -- |
| Sugar Creek | 158 | 1612 | 18.4 | 20.4 | 12.0 | 14.5 | 27.8 | 33.1 | 39.3 | 30.5 | 2.5 | 1.5 |
| Tuscarawas | 163 | 1783 | 54.0 | 68.0 | 11.7 | 12.1 | -- | -- | 33.1 | 19.4 | 1.2 | 0.5 |
| Washington | 189 | 2046 | 85.7 | 91.7 | 3.2 | 1.1 | -- | -- | 9.0 | 5.9 | 2.1 | 1.3 |
| County | 2240 | 25287 | 65.0 | 74.0 | 8.4 | 7.8 | 4.0 | 4.3 | 19.6 | 12.2 | 3.0 | 1.7 |



For Fluid Consumption
 Fluid for Manufacture
 Butterfat
 Swiss Cheese



Each 1/16 inch = 100 milk cattle

Figure 13. Number of Milk Cattle, by Market Outlet,
 Stark County, 1940

Summit County

Summit County contained the largest urban population of all the counties in this area and this had an important influence upon the dairy marketing situation. In the past 10 years there had been a striking increase in the number of farms in the county. In 1930 the Census gave 1503; by 1935 the number had increased to 2800; and in 1940, to 2943. This indicated that there were a large number of part-time farmers. Some of these farms had a few cows and in addition to the milk produced for family use they sold some to buyers at the farm. There were also several large dairy farms that offered milk in gallon jugs to the public.

The dairy production of the county went predominantly into milk for fluid consumption. 75.4 per cent of the farms and 86.7 per cent of the cattle fell into this classification in the survey. 16.4 per cent of the farms but only 9.2 per cent of the cattle were in the butterfat market. These farms were largely in townships with heavy mileage of earth roads. The number of farms selling to manufacturing plants was negligible.

Cooperative marketing has been an important influence. From Akron as the operating center the Milk Producers Association of Summit County and Vicinity has drawn for its membership from Portage, Wayne, Stark, Medina, Holmes and Tuscarawas Counties. The association was organized in 1917 and incorporated as a membership corporation under the Cooperative Law in 1933. It had a steady growth until 1930 when it had an active membership of 2683. During the early years of the past decade the population of Akron declined and some of the farms going to the Akron market shifted to Cleveland and other markets. The association made gains in Wayne and Tuscarawas Counties, but lost membership in the others. The loss was most pronounced in Medina and Portage Counties. Table 18 is a comparison of membership by counties of 1940 with 1930.

Table 18. Membership of Milk Producers Association
of Summit County and Vicinity, 1930 and 1940, by Counties

| County | June, 1930 | June, 1940 |
|------------|------------|------------|
| Holmes | 200 | 143 |
| Medina | 400 | 167 |
| Portage | 630 | 499 |
| Stark | 300 | 259 |
| Summit | 328 | 141 |
| Tuscarawas | 50 | 56 |
| Wayne | 775 | 848 |
| Total | 2683 | 2113 |

Supervision of milk supply by the local health administration was complete. The county had a full time administration with milk inspection. The same was true of the cities of Akron and Barberton. A recent order for separation of cattle from horses by solid partition in barns under inspection brought forth some protest on the part of producers. There has been for some time an exchange of inspections between Cleveland and Akron Health Boards.

In the late summer and fall of 1940, Akron milk dealers were short of milk for fresh milk and cream sales. Some was brought into the city on

special permit from outlying milk manufacturing plants.

The following list of distributors and milk manufacturing plants in operation was compiled from Health Board records and industry directories:

Distributors

E. L. Troelich
Akron Pure Milk
Averill Dairy
Barbara Jean Farm
Belle Isle Dairy
Chestnut Ridge
C. L. Frederick
H. & H. Dairy
Isaly Dairy
Chas. Kesselring
Lawson Milk Co.
Glen Null Dairy
Peoples Dairy
Perfection Dairy
Reiter Dairy
A. F. Stein
Montrose Dairy
Xcell Dairy
Pagua Dairies, Inc.

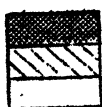
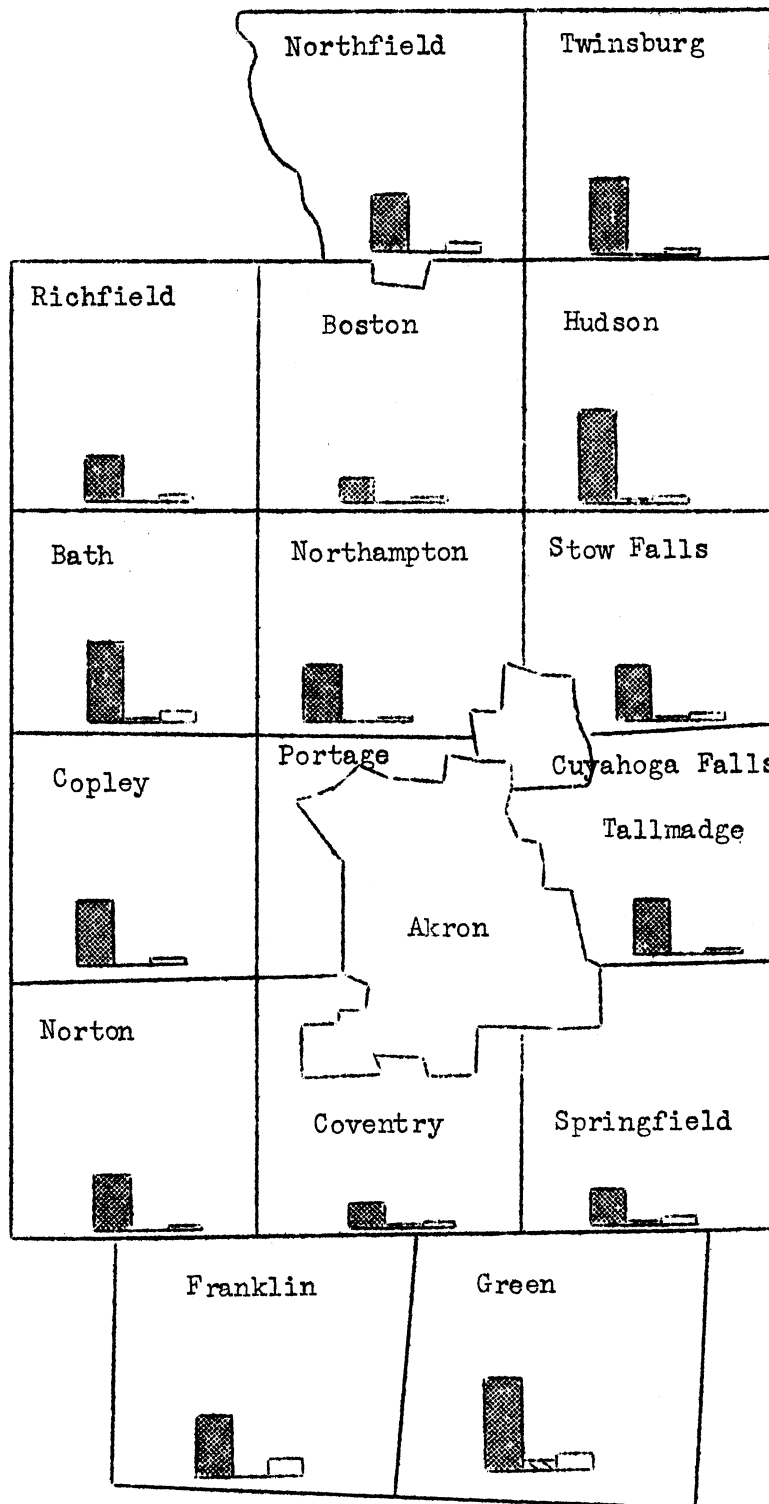
Plants manufacturing some dairy products

Courtney Dairy Co.
Bordens Dairy & Ice Cream
Gorrell Pharmacies
Liberty Dairy Products, Inc.
Sumner Creamery Co.
Telling Belle Vernon Co.
Waldorf Ice Cream Co.
Avon Dairy
Columbia Products Co.
Sanitary Milk Co.
E. Seiberling Milk Co.
Superior Ice Cream Co.
Warner Dairy Co.
Willowbrook Dairy
Consolidated Products Co.

The producer-distributor situation has undergone rapid change in the past five years. Under the Burk Act there were 32 producer distributors licensed for the year ending July 1, 1935. Of these, only five were reported in the survey as producer-distributors in 1940. There were, however, 78 additional farms checked as selling to consumers that were not licensed in 1935. Many of these farms had from 3 to 8 cows and sold only to a few neighbors but there were in this list 24 farms with 15 or more cattle tested.

Table 19. Number of Dairy Farms and Milk Cattle
and Per cent of Each by Market Outlet, Summit County, 1940

| Township | Total number of farms | Total number of milk cows | For fluid consumption Milk | | Fluid for manufacture Milk | | Butterfat Milk | | Not classified Milk | |
|-------------|--------------------------------|------------------------------------|----------------------------------|--------|----------------------------------|--------|-------------------|--------|---------------------------|--------|
| | | | Farms | cattle | Farms | cattle | Farms | cattle | Farms | cattle |
| | | | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) |
| Bath | 61 | 747 | 78.6 | 86.5 | 3.4 | 1.3 | 16.4 | 11.0 | 1.6 | 1.2 |
| Boston | 16 | 220 | 75.0 | 85.5 | -- | -- | 18.8 | 12.2 | 6.2 | 2.3 |
| Copley | 75 | 625 | 72.0 | 84.8 | -- | -- | 17.3 | 9.3 | 10.7 | 5.9 |
| Coventry | 22 | 256 | 72.8 | 85.2 | 18.2 | 5.5 | 4.5 | 6.6 | 4.5 | 2.7 |
| Franklin | 82 | 684 | 64.6 | 75.8 | -- | -- | 29.3 | 20.8 | 6.1 | 3.4 |
| Green | 102 | 1033 | 66.6 | 75.2 | 7.8 | 8.6 | 24.5 | 15.8 | 1.1 | .4 |
| Hudson | 55 | 796 | 89.1 | 94.9 | 1.8 | .6 | 9.1 | 4.5 | -- | -- |
| Northampton | 49 | 588 | 89.8 | 95.9 | -- | -- | 2.0 | .7 | 8.2 | 3.4 |
| Northfield | 36 | 548 | 75.0 | 86.0 | -- | -- | 22.2 | 12.8 | 2.8 | 1.2 |
| Norton | 47 | 509 | 89.3 | 93.5 | -- | -- | 4.3 | 2.2 | 6.4 | 4.3 |
| Richfield | 35 | 406 | 77.1 | 87.2 | -- | -- | 22.9 | 12.8 | -- | -- |
| Springfield | 45 | 400 | 53.3 | 73.3 | 11.1 | 6.5 | 26.7 | 16.0 | 8.9 | 4.2 |
| Stowfalls | 39 | 489 | 84.6 | 92.9 | 2.5 | 1.4 | 2.5 | 2.0 | 10.4 | 3.7 |
| Tallmadge | 31 | 462 | 80.7 | 93.4 | -- | -- | 3.2 | .9 | 16.1 | 5.7 |
| Twinsburg | 30 | 661 | 83.3 | 95.3 | -- | -- | 16.7 | 4.7 | -- | -- |
| County | 725 | 8424 | 75.4 | 86.7 | 2.9 | 1.8 | 16.4 | 9.2 | 5.3 | 2.3 |



For Fluid Consumption
Fluid for Manufacture
Butterfat

Each 1/16 inch = 100 milk cattle

Figure 14. Number of Milk Cattle, by Market Outlet,
Summit County, 1940

Tuscarawas County

This county, with Holmes, was the heart of the Swiss cheese area in Ohio in 1940. Its cheese plants accounted for more than one-third of the Ohio production. Table 8 gives the distribution of farms into the various outlets. It will be noted that there are 668 farms listed in the butterfat market as compared with 490 going to Swiss cheese. The significant fact however, is that the cheese factory farms far exceeded the butterfat farms in number of cattle. The cheese farms averaged almost 15 cattle per farm and the butterfat farms less than 8. The county was not an important source of milk for city distributors. Only 28 per cent of the cattle were in this classification.

The Swiss cheese industry of Ohio was brought into existence by the Swiss and German farmers of this county and Holmes County. The cheese making skill has been handed down from father to son. The small cheese factories were scattered over the county. The patronage varied greatly but ranged from about 20 to 150 farms to a factory. At one time many of the factories were operated only from May 1 to November 1, but recently they have operated the full year.

The health district was on a part time basis. The county inspector covered not only milk and meat supplies, but cheese factories, water supplies and quarantine work.

The producers supplying the milk distributors in New Philadelphia, Dennison, Uhrichsville and Dover were organized into a cooperative, The Tuscarawas Valley Cooperative Dairy Sales Association. Of 173 producers going into these markets, the association had 148 in its membership.

The plants listed as operating in the county were:

| <u>Distributors</u> | <u>Swiss Cheese Factories</u> | <u>Manufacturers (Ice cream, etc.)</u> |
|---------------------|-------------------------------|--|
| Union Dairy | Ed F. Steiner Cheese Co. | Sanitary Milk Co. |
| Maurer Dairy | Broad Run Dairy | Smith's Pure Ice Cream Co. |
| Knisely Dairy | Yaggi Dairy | Tuscaloosa Valley Co-op. |
| Davis Dairy | Ragersville Dairy Co. | Dairy and Sales, Inc. |
| McAllister Dairy | Eckert Dairy Co. | Noacker Ice Cream Co. |
| Riggle Dairy | Champion Cheese Co. | Newcomerstown Products Co. |
| Dover Dairy | No. 7 Dairy | Riverside Creamery Co. |
| Albert Z. Hess | Pleasant View Dairy | Uhrichsville Ice Co. |
| | Sugar Creek Dairy | H. C. Cappel Co. |
| | Valley View Dairy | Goshen Dairy |
| | Zoarville Cheese Co. | Fairview Dairy |
| | Fiat Dairy | |
| | Stone Creek Cheese Co. | |

Producer-distributors occupied a prominent place in fresh milk distribution in the county. In 1935 there were 89 licensed. Of this 12 were reported as operating in 1940. In the lists mailed and returned in this survey there were 43 new names added. Of these 15 farms had 15 or more dairy cattle tested.

Table 20. Number of Dairy and Milk Cattle
and Per cent of Each by Market Outlet, Tuscarawas County, 1940

| Township | Total number of farms | Total number of milk cows | For fluid consumption | | Fluid for manufacture | | Swiss cheese | | Butterfat | | Not classified | |
|-------------|--------------------------------|------------------------------------|--------------------------|--------|--------------------------|--------|--------------|--------|-----------|--------|-------------------|--------|
| | | | Milk | | Milk | | Milk | | Milk | | Milk | |
| | | | Farms | cattle | Farms | cattle | Farms | cattle | Farms | cattle | Farms | cattle |
| | | | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) |
| Auburn | 100 | 1383 | — | — | 1.0 | .6 | 92.0 | 97.6 | 7.0 | 1.9 | — | — |
| Bucks | 113 | 1591 | 1.8 | 3.4 | 1.8 | .6 | 79.6 | 86.7 | 15.0 | 7.5 | 1.8 | 1.8 |
| Clay | 80 | 814 | 5.0 | 5.8 | 47.5 | 63.3 | — | — | 47.5 | 30.9 | — | — |
| Dover | 168 | 2318 | 37.5 | 50.7 | 10.7 | 6.2 | 26.2 | 30.0 | 25.0 | 12.8 | .6 | .3 |
| Fairfield | 47 | 495 | 12.7 | 14.9 | 23.4 | 28.7 | 6.4 | 7.7 | 57.5 | 48.7 | — | — |
| Franklin | 85 | 1036 | 21.2 | 29.3 | 14.1 | 10.5 | 41.1 | 47.0 | 17.7 | 11.1 | 5.9 | 2.1 |
| Goshen | 112 | 1264 | 27.7 | 52.4 | 35.7 | 24.3 | — | — | 36.6 | 23.3 | — | — |
| Jefferson | 88 | 921 | 3.4 | 5.7 | 26.1 | 30.6 | 37.5 | 45.5 | 33.0 | 18.2 | — | — |
| Lawrence | 73 | 746 | 30.1 | 43.7 | 2.7 | 4.0 | 21.9 | 20.4 | 45.2 | 31.9 | — | — |
| Mill | 62 | 676 | 48.4 | 66.0 | 1.6 | 1.2 | — | — | 41.9 | 27.8 | 8.1 | 5.0 |
| Oxford | 57 | 479 | 10.5 | 17.3 | 24.6 | 26.7 | — | — | 64.9 | 56.0 | — | — |
| Perry | 62 | 506 | 3.2 | 6.4 | 4.9 | 4.7 | — | — | 91.9 | 88.0 | — | — |
| Rush | 101 | 854 | 29.7 | 37.7 | 17.8 | 19.9 | — | — | 48.5 | 40.3 | 4.0 | 2.1 |
| Salem | 105 | 1223 | 20.0 | 33.8 | 30.5 | 32.7 | — | — | 45.7 | 32.0 | 3.8 | 1.5 |
| Sandy | 62 | 838 | 67.7 | 82.4 | 3.2 | 2.5 | — | — | 22.6 | 13.5 | 6.5 | 1.6 |
| Sugar Creek | 150 | 2144 | 5.3 | 7.5 | 5.3 | 4.2 | 76.7 | 82.6 | 12.7 | 5.7 | — | — |
| Union | 59 | 504 | 40.7 | 51.1 | 28.8 | 30.4 | — | — | 22.0 | 14.9 | 8.5 | 3.6 |
| Warren | 90 | 940 | 16.7 | 26.4 | 41.1 | 43.3 | — | — | 34.4 | 27.2 | 7.8 | 3.1 |
| Warwick | 50 | 489 | 44.0 | 62.4 | 12.0 | 13.1 | — | — | 44.0 | 24.5 | — | — |
| Washington | 75 | 731 | 1.3 | 5.5 | 28.0 | 34.9 | — | — | 70.7 | 59.6 | — | — |
| Wayne | 81 | 882 | 9.9 | 12.9 | 7.4 | 8.5 | 33.3 | 43.3 | 45.7 | 32.9 | 3.7 | 2.4 |
| York | 88 | 1255 | 34.1 | 35.3 | 11.3 | 9.6 | 39.8 | 47.6 | 14.8 | 7.5 | — | — |
| County | 1908 | 22084 | 20.3 | 28.3 | 16.9 | 15.7 | 25.7 | 32.9 | 35.0 | 22.2 | 2.1 | .9 |

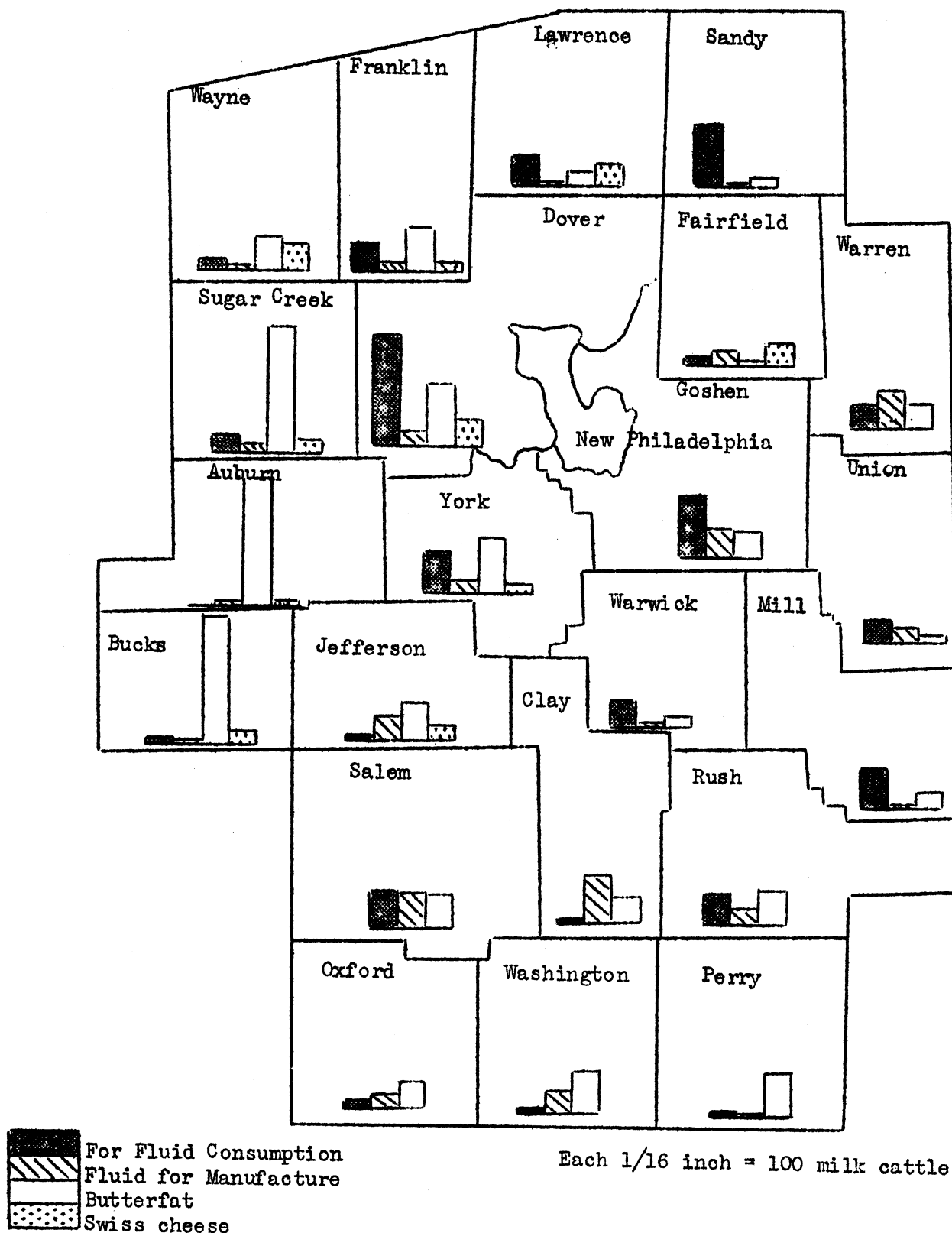


Figure 15. Number of Milk Cattle, by Market Outlet
Tuscarawas County, 1940

Wayne County

Wayne County is one of the best agricultural counties in the state. At one time it was outstanding in the production of draft horses. With the changing economic picture and the increasing demand for milk by the city of Cleveland, the county has moved into more intensive dairying.

Table 21 lists 58.5 per cent of the farms and 67.3 per cent of the milk cattle in the fluid consumption market. There were only four townships that had less than 50 per cent of the farms and the cattle in the city market. These townships were Clinton, East Union, Paint and Sugar Creek. In all these there was a large percentage in manufacturing outlets.

The Department of Health was a full time unit serving both the county and the city of Wooster. Modern milk regulations were enforced. The Health Department had 137 farms under inspection in the summer of 1940. The milk from these farms was practically all going into consumption in Wayne County.

The producers selling to dealers in Wooster are organized as a collective bargaining cooperative association. The Wayne County Milk Producers Association.

The plants listed as in operation in 1940 were:

Distributors

Ideal Dairy Company
Sweet Clover Dairy Company
Winkler's Dairy
Wooster Farm Dairies Company
Lone Oak Dairy

Manufacturing Plants

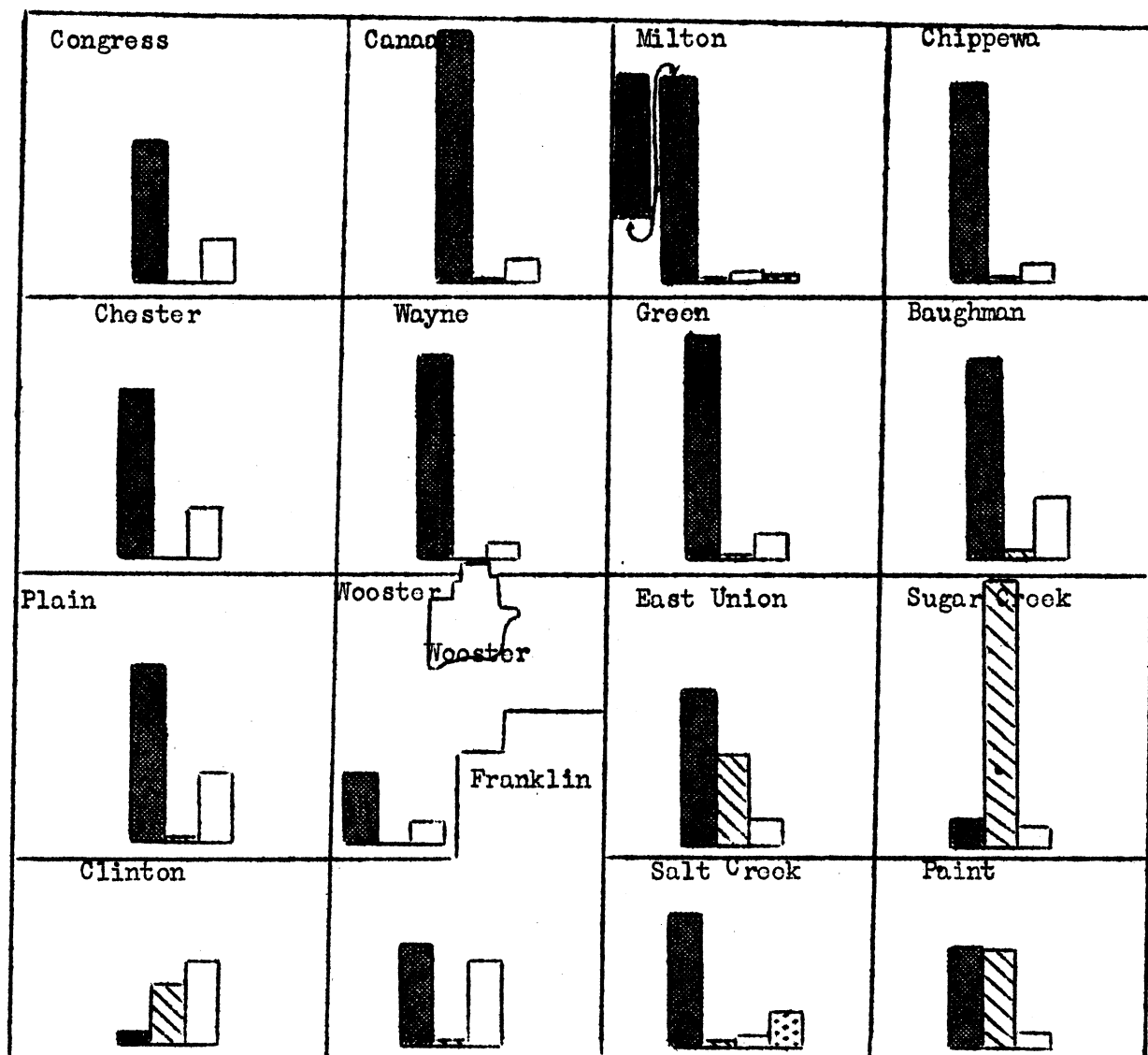
Orrville Milk Condensing Company
Farmers Dairy Products Company
Cottage Creamery
Steiner and Maibarly
Kidron Cheese Company

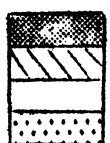
Wooster Farm Dairies also operates as a cooling station. Milk is received, cooled and standardized and then delivered in glass lined insulated tank trucks to dealers in Cleveland.

A large percentage of the local milk supply of Wayne County was supplied by producer-distributors. In 1935 there were 29 licensed by the Milk Commission. In 1940, 9 of these remained as producer-distributors. In addition, there were 30 new farms recorded as selling from farm to consumer. Of these 30 farms, 9 were credited with 15 or more dairy cattle tested. The remainder were evidently not of great commercial importance.

**Table 21. Number of Dairy and Milk Cattle
and Per cent of Each by Market Outlet, Wayne County, 1940**

| Township | Total | | For fluid | | Fluid for | | Swiss cheese | | Butterfat | | Not | |
|-------------|--------|---------|-------------|--------|-------------|--------|--------------|--------|-----------|--------|------------|--------|
| | Total | Total | consumption | | manufacture | | Milk | | Milk | | classified | |
| | number | number | Milk | | Milk | | Milk | | Milk | | Milk | |
| | of | of milk | Farms | cattle | Farms | cattle | Farms | cattle | Farms | cattle | Farms | cattle |
| | farms | cattle | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) | (pct.) |
| Baughman | 204 | 2433 | 64.1 | 72.6 | 2.5 | 3.0 | --- | --- | 30.9 | 22.9 | 2.5 | 1.5 |
| Canaan | 187 | 2459 | 83.5 | 91.0 | .5 | .3 | --- | --- | 15.5 | 8.3 | .5 | .4 |
| Chester | 192 | 1987 | 64.6 | 74.7 | --- | --- | --- | --- | 32.3 | 22.8 | 3.1 | 2.5 |
| Chippewa | 176 | 1946 | 84.7 | 89.9 | 1.7 | .9 | --- | --- | 10.8 | 7.6 | 2.8 | 1.6 |
| Clinton | 143 | 1403 | 6.3 | 8.5 | 33.5 | 38.3 | --- | --- | 57.4 | 51.8 | 2.8 | 1.4 |
| Congress | 151 | 1632 | 65.6 | 75.7 | --- | --- | --- | --- | 31.8 | 22.9 | 2.6 | 1.4 |
| East Union | 199 | 2437 | 46.2 | 55.9 | 32.7 | 33.8 | --- | --- | 20.6 | 9.6 | .5 | .7 |
| Franklin | 160 | 1706 | 39.4 | 53.2 | 1.2 | 1.4 | --- | --- | 56.9 | 44.1 | 2.5 | 1.3 |
| Green | 185 | 2296 | 82.2 | 87.9 | 2.2 | 1.4 | --- | --- | 15.1 | 10.4 | .5 | .3 |
| Milton | 206 | 3243 | 91.3 | 94.8 | 1.4 | .6 | 2.9 | 2.5 | 4.4 | 2.1 | --- | --- |
| Paint | 150 | 1923 | 41.3 | 46.6 | 44.0 | 43.8 | --- | --- | 12.0 | 7.2 | 2.7 | 2.4 |
| Plain | 194 | 2199 | 53.1 | 69.7 | 1.0 | 1.6 | --- | --- | 44.9 | 27.9 | 1.0 | .8 |
| Salt Creek | 133 | 1691 | 60.9 | 69.2 | 3.0 | 3.3 | 6.0 | 5.6 | 27.8 | 19.5 | 2.3 | 2.4 |
| Sugar Creek | 236 | 2865 | 8.9 | 8.9 | 78.4 | 83.5 | --- | --- | 11.4 | 6.9 | 1.3 | .7 |
| Wayne | 155 | 1979 | 87.7 | 91.1 | --- | --- | --- | --- | 9.7 | 6.8 | 2.6 | 2.1 |
| Wooster | 78 | 864 | 52.6 | 72.8 | --- | --- | --- | --- | 41.0 | 23.8 | 6.4 | 3.4 |
| County | 2749 | 33062 | 58.5 | 67.3 | 14.1 | 14.7 | .5 | .5 | 25.0 | 16.3 | 1.9 | 1.2 |




 For Fluid Consumption
 Fluid for Manufacture
 Butterfat
 Swiss Cheese

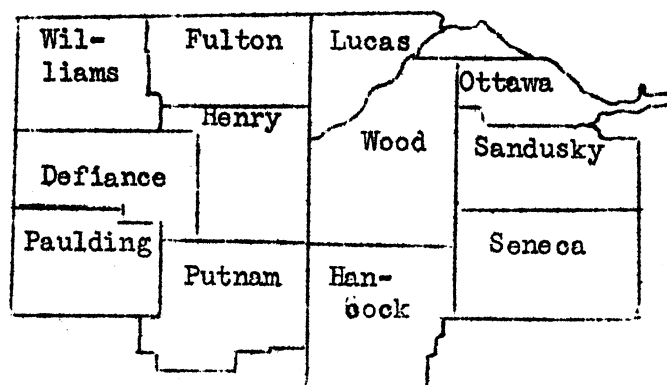
Each 1/16 inch = 100 milk cattle

Figure 16. Number of Milk Cattle, by Market Outlet
Wayne County, 1940

FARM SALES OF OHIO MILK THROUGH DIFFERENT OUTLETS

III. Toledo and Northwestern Ohio Area: Defiance, Fulton, Hancock, Henry, Lucas, Ottawa, Paulding, Putnam, Sandusky, Seneca, Williams and Wood Counties

C. G. McBride
and
R. W. Sherman



Department of Rural Economics
Mimeograph Bulletin No. 131 - Part III

Ohio State University
and
Ohio Agricultural Experiment Station

Columbus, Ohio
June, 1941

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Farm Sales of Ohio Milk Through Different Outlets

Part III

III. Toledo and Northwestern Ohio Area: Defiance, Fulton, Hancock, Henry, Lucas, Ottawa, Paulding, Putnam, Sandusky, Seneca, Williams and Wood Counties

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FARM SALES OF MILK THROUGH DIFFERENT OUTLETS

III. Toledo and Northwestern Ohio Area: Defiance, Fulton, Hancock Henry, Lucas, Ottawa, Paulding, Putnam, Sandusky, Seneca, Williams, and Wood Counties 1

by
C. G. McBride and R. W. Sherman

Sources of Data:

This study, the third of a series, is based upon a survey of all farms with three or more dairy cattle at the time of the last test for tuberculosis conducted by the U.S. Bureau of Animal Industry and the Ohio Department of Agriculture. The records were obtained through the cooperation of these authorities and Agricultural Extension Agents in charge of the records in the counties.

A list of herd owners was arranged by townships. Several copies of each list were made and these were mailed to a carefully selected group of key men, well distributed in each township. Each recipient of a list was asked to check the disposition of milk from each farm on which he had this information. When a producer was selling to a city milk dealer and to a manufacturing outlet he was recorded in the city milk dealer outlet.

When the checked sheets were returned the reports for each township were combined and in most cases it was found that a practically complete record had been obtained. In a few townships, the returns were not full enough to constitute a satisfactory record. Personal visits were made into these townships in order to complete the data. A very high percentage of those who received lists cooperated by returning them promptly. Without this generous response on the part of those who were asked to assist, this survey would not have been possible. The cost in time and money of personal visitation to every township would have been prohibitive.

Limitations of the Study

Some difficulties were encountered in obtaining the information from the testing records. Some herds designated as mixed breeds undoubtedly were in whole or part beef cattle, but there was no way to determine the exact numbers. In areas surrounding the cities, there were many farms with 3 or 4 cattle tested. Replies indicated that many of these were kept primarily for home use but in some cases a small amount of milk or butterfat might be sold at certain times. Those who reported often lacked accurate information as to disposal of dairy products on such farms.

Some farmers had moved out of the townships between the times of the test and the survey, but this factor was in large measure adjusted by the addition of new names by those reporting. In a very few cases, where all attempts to obtain a complete record left too large a percentage of farms unclassified, some adjustments were made, based on the records of adjacent townships with approximately the same conditions. Despite the limitations described above, it is believed that the study presents a dependable picture of the disposal of milk from the farms of the area.

1 Area I comprised Delaware, Fairfield, Franklin, Licking, Madison, Pickaway and Union Counties. Area II, Carroll, Columbiana, Holmes, Medina, Portage, Stark, Summit, Tuscarawas and Wayne Counties.

Type of Farming

This district is one of heavy grain and hay production. A high proportion of these 12 counties is suitable to the production of most general farm crops. Dairying in Northwestern Ohio is not nearly so important as in Northeastern Ohio as a source of cash income to farmers. In the nine counties comprising the Akron and Canton milk sheds, the average cash income per county from dairying was \$1,500,000 in 1938. In the twelve counties of the Northwestern Ohio area the average was slightly less than \$900,000. Fulton County with about \$1,450,000 had the highest income from dairying of any of the twelve counties of this area.

The following table shows the first four most important sources of cash farm income for each county. Dairying ranks first in six counties, second in five counties and third in one county. It also ranks first for the area as a whole with 20 per cent of the total cash income as compared to 45 per cent for the counties of the Akron and Canton area.

Table I. Important Sources and Percentage of Total Cash Farm Income Contributed by, and Rank of Each, 12 Northwestern Ohio Counties, 1934 - 1938 Average*

| County | Total Cash Farm Income | Rank of sources of income and their relative importance | | | | | | | |
|----------|------------------------|---|---------------|------------|---------------|---------|---------------|---------|---------------|
| | | First | Pct. of Total | Second | Pct. of Total | Third | Pct. of Total | Fourth | Pct. of Total |
| Defiance | \$3,358,000 | DAIRY | 22 | Hogs | 16 | Poultry | 13 | Wheat | 12 |
| Fulton | 5,018,000 | DAIRY | 29 | Hogs | 18 | Poultry | 17 | Wheat | 8 |
| Hamcock | 5,496,000 | Hogs | 26 | DAIRY | 23 | Wheat | 13 | Poultry | 11 |
| Henry | 4,615,000 | DAIRY | 19 | Poultry | 17 | Corn | 15 | Hogs | 13 |
| Lucas | 3,502,000 | Truck | 19 | Greenhouse | 17 | DAIRY | 13 | Corn | 7 |
| Ottawa | 2,436,000 | DAIRY | 20 | Fruit | 15 | Wheat | 11 | Poultry | 11 |
| Paulding | 3,010,000 | Corn | 22 | DAIRY | 18 | Hogs | 13 | Poultry | 10 |
| Putnam | 5,407,000 | Hogs | 21 | DAIRY | 16 | Poultry | 16 | Wheat | 14 |
| Sandusky | 4,388,000 | DAIRY | 20 | Hogs | 14 | Wheat | 13 | Corn | 9 |
| Seneca | 5,063,000 | Hogs | 24 | DAIRY | 21 | Wheat | 15 | Poultry | 9 |
| Williams | 3,726,000 | DAIRY | 26 | Hogs | 20 | Poultry | 16 | Wheat | 11 |
| Wood | 7,462,000 | Corn | 17 | DAIRY | 15 | Cattle | 13 | Hogs | 13 |
| Total | \$53,546,000 | DAIRY | 20 | Hogs | 17 | Poultry | 12 | Wheat | 11 |

Transportation Facilities

The status of market outlets for milk in any area depends greatly upon the transportation facilities. In this area the transportation of milk and cream to city markets and manufacturing plants is now entirely by motor truck.

The public road mileage as of January 1, 1940, classified in three types, hard surface, gravel and earth, is given by counties in Table 2. The percentage of hard surface roads in this area was high. Hard surface and gravel combined comprised 90% of the road mileage. There were only 1268 miles of earth road in the 12 counties. There was, therefore, a relatively small number of farms that did not have all year round transportation facilities available for milk or cream deliveries.

3.

Table 2. Public Road Mileage of the Area by Types and by Counties
as of January 1, 1940

| County | Hard Surface | | Gravel | | Earth | | Total |
|----------|--------------|------|--------|------|--------|------|---------|
| | Miles | Pct. | Miles | Pct. | Miles | Pct. | Miles |
| Defiance | 295.0 | 30.0 | 597.0 | 60.7 | 91.0 | 9.3 | 983.0 |
| Fulton | 326.0 | 36.9 | 519.0 | 58.8 | 38.0 | 4.3 | 883.0 |
| Hancock | 304.0 | 26.3 | 798.0 | 69.0 | 55.0 | 4.7 | 1157.0 |
| Henry | 635.0 | 66.0 | 161.0 | 16.7 | 166.0 | 17.3 | 962.0 |
| Lucas | 587.0 | 57.4 | 153.0 | 15.0 | 282.0 | 27.6 | 1022.0 |
| Ottawa | 521.0 | 86.5 | 3.0 | 0.5 | 79.0 | 13.0 | 602.0 |
| Paulding | 69.0 | 7.0 | 812.0 | 82.4 | 104.0 | 10.6 | 985.0 |
| Putnam | 168.0 | 14.1 | 981.0 | 82.6 | 39.0 | 3.3 | 1188.0 |
| Sandusky | 668.0 | 70.7 | 214.0 | 22.6 | 63.0 | 6.7 | 945.0 |
| Seneca | 925.0 | 69.5 | 132.0 | 11.3 | 107.0 | 9.2 | 1164.0 |
| Williams | 221.0 | 23.1 | 654.0 | 68.5 | 80.0 | 8.4 | 955.0 |
| Wood | 1174.0 | 81.9 | 95.0 | 6.6 | 165.0 | 11.5 | 1434.0 |
| Total | 5893.0 | 48.0 | 5119.0 | 41.7 | 1268.0 | 10.3 | 12280.0 |

Comparison of Study Data with Census and Crop and Livestock Reports

The United States Census and the Federal-State Cooperative Crop and Livestock Reporting Service have a listing of milk cattle as "cows and heifers, 2 years old and over". This classification can be used to compare the data collected for this study.

Table 3. Number of Cows and Heifers, 2 Years Old and Over, Number of Milk Cows
Number of Cows Milked per Farm and Number of Cattle and Milk Cows per Farm
In the Study, by Counties

| County | Milk cows & heifers 2 yrs. old & over | | Cows*** per farm 1940 Census | All cattle per farm in study | Cows only per farm in study |
|-------------|--|-------------------------|------------------------------------|------------------------------------|-----------------------------------|
| | Crop & Livestock estimates, 1940* | Milk cows in study** | | | |
| Defiance | 9,700 | 9,703 | 5.1 | 9.5 | 6.2 |
| Fulton | 14,800 | 14,756 | 5.8 | 9.6 | 7.0 |
| Hancock | 15,100 | 16,178 | 6.0 | 9.2 | 7.8 |
| Henry | 10,000 | 9,778 | 4.3 | 7.0 | 6.1 |
| Lucas | 5,200 | 2,889 | 3.3 | 7.0 | 5.1 |
| Ottawa | 6,100 | 5,916 | 4.2 | 9.2 | 6.0 |
| Paulding | 6,700 | 7,221 | 4.6 | 7.3 | 5.4 |
| Putnam | 12,400 | 12,318 | 5.9 | 7.8 | 5.7 |
| Sandusky | 11,200 | 11,478 | 5.4 | 9.2 | 6.7 |
| Seneca | 14,100 | 16,609 | 5.9 | 10.1 | 7.4 |
| Williams | 11,600 | 13,097 | 5.7 | 9.4 | 6.9 |
| Wood | 12,800 | 11,383 | 4.4 | 7.1 | 5.2 |
| 12 Counties | 129,700 | 131,326 | 5.1 | 9.5 | 6.2 |
| State | 1,043,000 | xxx | 5.3 | xxx | xxx |

* Preliminary

** Conversion factor of 73.3 used as explained above

*** Cows and heifers 2 years old and over kept mainly for milk production, 1939

The test records from which this study was made listed all cattle tested for tuberculosis. Records were available in this 12 county area on several hundred milk producers as to the number of milk cows in their herds. These and the tuberculosis test records were for approximately the same period and from these two sources a valid comparison was possible.

In these two sets of records several hundred identical farms were compared. It was found that for each 100 cattle tested there were 73.3 milk cows. This ratio has been used as a conversion factor to convert "all cattle" of the test records to an estimated number of "milk cows". These computed figures are compared with the crop and livestock estimates in Table 3.

The number of milk cows computed from this study agrees with the Crop and Livestock Service estimates with the exception of three or four Counties. In those counties where beef type cows are milked part of the year, the study figures are higher than those of the Crop and Livestock Services. In Lucas County where there are many one and two cow herds, the figure is much lower.

In Table 3 a comparison also is made of cows per farm as recorded in the 1940 Census with the computed figures of the study. In the Census figures the total number of cows milked any time during 1939 were divided by the number of farms reporting cows and heifers 2 years old and over kept mainly for milk production. The average per farm of milk cows for the study was computed by applying the conversion factor mentioned above to all cattle tested. It is obvious that the average of the study would be higher than for the Census, because the farms with 1 or 2 milk cows are included in the Census but not in the survey.

Table 4. Sales of Whole Milk and Butterfat and Number of Farms Reporting Each, by County, 1939

| County | Farms reporting whole milk sold (number) | Annual Sales of whole milk per farm reporting (gallons) | Farms reporting cream sold as butterfat (number) | Annual sales of butterfat per farm. (pounds) |
|-------------|---|--|---|---|
| Defiance | 1223 | 2499 | 557 | 784 |
| Fulton | 1757 | 3993 | 405 | 906 |
| Hancock | 1100 | 2781 | 1312 | 850 |
| Henry | 1172 | 2377 | 904 | 662 |
| Lucas | 398 | 2924 | 244 | 408 |
| Ottawa | 827 | 2485 | 233 | 419 |
| Paulding | 771 | 2145 | 674 | 598 |
| Putnam | 1329 | 2043 | 1073 | 574 |
| Sandusky | 1179 | 3213 | 648 | 552 |
| Seneca | 1165 | 3027 | 1247 | 625 |
| Williams | 1126 | 3126 | 1044 | 852 |
| Wood | 1311 | 2710 | 1014 | 468 |
| 12 counties | 13358 | 2837 | 9355 | 642 |

Source: 1940 Census of Agriculture, First Series, Ohio

In Table 4 is listed the number of farms selling whole milk and butterfat for 1939 according to the 1940 Census. The six counties, Hancock, Henry, Putnam, Seneca, Williams and Wood sold 70% of all the butterfat sold in this 12 county area. Since 1930 there has been an increase of 1930 farms selling whole milk and a decrease of 2748 farms selling butterfat.

Table 5. Number of Dairy Cows Compared with Total Population in Counties of the Area, 1900 and 1940

| County | 1900 | | | 1940 | | |
|----------|-------------|------------------|-------------------------|-------------|------------------|-------------------------|
| | Dairy Cows* | Total Population | Cows per 100 population | Dairy Cows* | Total Population | Cows per 100 population |
| Defiance | 6,986 | 26,387 | 26 | 9,564 | 24,367 | 39 |
| Fulton | 10,377 | 22,801 | 46 | 13,670 | 23,626 | 58 |
| Hancock | 10,399 | 41,993 | 25 | 15,113 | 40,793 | 37 |
| Henry | 8,427 | 27,282 | 31 | 9,421 | 22,756 | 41 |
| Lucas | 8,212 | 153,559 | 5 | 4,079 | 344,333 | 1 |
| Ottawa | 5,918 | 22,213 | 27 | 5,453 | 24,360 | 22 |
| Paulding | 6,390 | 27,528 | 23 | 6,944 | 15,527 | 45 |
| Putnam | 9,491 | 32,525 | 29 | 12,362 | 25,016 | 49 |
| Sandusky | 8,519 | 34,311 | 25 | 10,693 | 41,014 | 26 |
| Seneca | 11,839 | 41,163 | 29 | 14,588 | 48,499 | 30 |
| Williams | 7,130 | 24,953 | 29 | 12,406 | 25,510 | 49 |
| Wood | 11,551 | 51,555 | 22 | 12,086 | 51,796 | 23 |
| Total | 105,239 | 506,270 | 21 | 126,379 | 687,597 | 18 |

Source, U. S. Census of Population and of Agriculture, 1900 and 1940

* Cows and heifers 2 years old and over kept mainly for milk production, 1939

There was little change in population in the counties from 1900 to 1940 with the exception of Lucas County which more than doubled and in Paulding where the population fell more than 40%. The net increase for the entire area was just about equal to the increase in Lucas County. In both 1900 and 1940 there were enough cows within each county, except Lucas, to more than supply the fluid milk needs of the county. For the area as a whole there were about three times as many cows as necessary to supply such needs.

Changes in Market Outlets, 1903 to 1940

One of the first records of a systematic survey of outlets for milk and butterfat from Ohio farms is found in the annual report of the Ohio Dairymen's Association for 1903.¹ Professor J. W. Decker of Ohio State University compiled this directory of butter and cheese factories and milk skimming and shipping stations. The totals for the state were: butter factories, 148; skimming stations, 77; milk shipping stations, 22; American cheese factories, 114; Swiss cheese factories, 92. The report did not include milk dealers who purchased from farmers nor producer-distributors who sold milk at retail.

The 12 counties of this area had in 1903, only 16 creameries or butter factories, 5 skimming stations, and 23 American cheese factories. The plants were classified as to type of ownership into private, stock company and cooperative. In Table 6 these plants are listed by county and type of ownership. The most important fact revealed by this 1903 survey is that at that time there was a concentration of American cheese factories in Fulton County which comprised approximately 25 per cent of those in the entire state. Excepting these, there was no significant concentration of milk manufacturing.

¹ Reprint Annual Report Ohio Dairymen's Association, 1903, J.W. Decker

Table 6. Dairy Plants in Area in 1903
(excluding those engaged only in Milk Distribution)

| County | Creameries | | | Skimming Stations | | | American cheese Factories | | | Total |
|----------|------------|---|---|-------------------|---|---|---------------------------|---|---|-------|
| | P | S | C | P | S | C | P | S | C | |
| Defiance | 3 | - | - | - | - | - | - | - | - | 3 |
| Fulton | 1 | - | 2 | - | - | 1 | 20 | - | - | 24 |
| Hancock | - | - | - | - | - | - | - | - | - | 0 |
| Henry | 1 | - | - | 3 | - | - | 2 | - | - | 6 |
| Lucas | - | - | - | - | - | - | 1 | - | - | 1 |
| Ottawa | 1 | - | - | - | - | - | - | - | - | 1 |
| Paulding | - | - | - | - | - | - | - | - | - | 0 |
| Putnam | - | 1 | - | - | - | - | - | - | - | 1 |
| Sandusky | 4 | - | - | - | - | - | - | - | - | 4 |
| Seneca | - | - | - | 1 | - | - | - | - | - | 1 |
| Williams | 1 | - | 1 | - | - | - | - | - | - | 2 |
| Wood | - | - | 1 | - | - | - | - | - | - | 1 |
| Total | 11 | 1 | 4 | 4 | 0 | 1 | 23 | 0 | 0 | 44 |

Key: P = Private
S = Stock
C = Cooperative

Source: Ohio Dairyman's Association Report of 1903

A survey of sources of market milk and butterfat in Ohio was made in 1931 by McBride and Cowden². This survey also recorded manufacturing operations. By 1931 the American cheese factories had been absorbed by the demand for whole milk for city distribution, or for manufacturing into condensed or evaporated milk. This new phase of manufacturing had made remarkable gains in the 27 years between these two surveys. There were in 1931 ten large manufacturing plants in these 12 counties. They were manufacturing mostly evaporated and condensed milk although other products such as powdered milk, and sweet cream were produced in considerable quantities. The product was shipped mostly in car lots to eastern markets.

The greatest concentration of farms selling to manufacturing plants in 1931 was in Williams, Fulton, Henry and Putnam Counties. In the 12 counties there were enough farms going to these plants to equal the fresh milk supply for the city of Cleveland.

At that time, however, Cleveland had not found it necessary to draw to any great extent upon the area for milk. There were 683 farms under Cleveland inspection in 1931, approximately half of which were in Sandusky County.

In the 1931 survey, the manufacture of butter showed considerable importance. The following places were listed as churning points: Arcadia, Bryan, Defiance, Findlay, Fostoria, Gibsonburg, Montpelier, Napoleon, Oak Harbor, Ohio City, Tiffin, Toledo and Woodville. There were 12,139 farms listed as selling butterfat for manufacture.

² Ohio Agricultural Experiment Station Bulletin No. 523, Sources of Market Milk and Butterfat in Ohio. C. G. McBride and T. K. Cowden, 1933

This area does not show great change between 1931 and 1940. Most of the changes took place between 1903 and 1931. The 1940 study disclosed a large number of farms going into manufacturing outlets. In Table 7 is given a classification of dairy plants excepting those that were engaged wholly in milk distribution. There were 10 plants engaged primarily in the production of evaporated and condensed milk. This is the same number reported in the 1931 survey. Of the 29 plants engaged in milk and cream and other miscellaneous products about one-third were in Toledo. There was no heavy concentration of butter manufacturing anywhere in the 12 counties.

Table 7. Dairy Plants in Area in 1940
(excluding those engaged only in Milk Distribution)

| County | Butter Manufac- turing | Milk con- densing or evaporating | American cheese manu- facturing | Combination including ice cream | Total |
|----------|------------------------------|--|---------------------------------------|---------------------------------------|-------|
| Defiance | 2 | 1 | 0 | 1 | 4 |
| Fulton | 0 | 2 | 1 | 1 | 4 |
| Hancock | 1 | 1 | 0 | 2 | 4 |
| Henry | 2 | 1 | 0 | 1 | 4 |
| Lucas | 0 | 1 | 0 | 9 | 10 |
| Ottawa | 1 | 0 | 0 | 1 | 2 |
| Paulding | 0 | 0 | 0 | 0 | 0 |
| Putnam | 0 | 1 | 0 | 3 | 4 |
| Sandusky | 3 | 1 | 0 | 4 | 8 |
| Seneca | 2 | 1 | 0 | 3 | 6 |
| Williams | 3 | 1 | 0 | 3 | 7 |
| Woods | 1 | 0 | 0 | 1 | 2 |
| Total | 15 | 10 | 1 | 29 | 55 |

Source: Who's Who in the Butter, Cheese and Milk Industries in 1940. Records of the Ohio Dairy Products Association and the Ohio Swiss Cheese Association.

Status of Sanitary Controls by Health Board

The Toledo health district is the largest and has been active for many years in milk inspection. In the summer of 1941 the United States Public Health Service Ordinance was in effect in Henry, Ottawa and Wood Counties and in the City of Tiffin health district. Sandusky County was in process of adopting this standard ordinance.

Because of the lack of heavy concentration of population the sanitary control program had not advanced as far as in areas 1 and 2. There has been a marked increase in interest within recent months in the U. S. Public Health Service ordinance.

Cooperative Marketing by Producers.

One strong producers association, the Northwestern Cooperative Sales Association serves producers in the area selling to butter factories, evaporating plants and the Toledo market. It was organized in 1920 and 1921 with offices at Wauseon. In the first few years most emphasis was placed upon service to producers selling butterfat. At one time the association was operating 16 cooperative cream stations.

In 1927 the Association entered into contracts with most of buyers of milk for evaporating and condensing. These contracts included provisions regarding weights, tests and hauling and the association also represented its members in bargaining on prices.

The Association also attempted, during the first 10 years of its operation, to sell milk on a cooperative basis to the dealers in Toledo. At first it met with only moderate success in this field. Early in the 30's the office was moved to Toledo and from that time the Association has gained in prestige in this market.

Early in 1938 the Northwestern Cooperative Sales Association made application to the Secretary of Agriculture for a public hearing to determine whether Toledo should be made a Federal market under the Agricultural Adjustment Administration. Hearings were held in May and June, 1938. An order was issued by the Secretary to become effective on September 16, 1938. Since that date the market has been supervised by a Milk Market Administrator. The Association continues to function and has gained substantially in membership.

Summary of Study by Counties and Townships:

The material included in this section is a compilation of the information furnished by those who assisted in the mail survey supplemented by some additional data obtained in personal visits to the counties. Tables 8 to 10 and Figures 1 to 4 summarize the material for the district by counties. A discussion of each county with township analyses follows.

Table 8 summarizes the distribution of farms and cattle among the market outlets and Table 9 shows the percentage distribution of these farms and cattle by market outlet. In Table 10 is given the number of cows per farm by market outlet.

Milk sold by producer-distributors belongs in the same outlet classification as milk sold to dealers for fresh fluid consumption. In the county tables they are combined. To find the number of farms and cattle involved in supplying consumers with fresh milk it is necessary in all instances to combine the "Producer-Distributor" figures with those of "Fluid to Distributor". The total number of farms in this classification is 3727, or 18.0 per cent. These 3727 farms, however, have 23.0 per cent of the milk cattle because the larger dairy farms seek the city market outlets. The farms selling butterfat rank lowest in average number of cows per farm.

Among the counties the variation in per cent of dairy farms selling milk for fluid consumption is from 2.5 per cent for Defiance County to 44.4 per cent for Wood County. In the case of number of milk cows on farms selling milk for fluid consumption, Defiance County was low with 4.1 per cent and Lucas was high with 55.0 per cent.

The figures 1 to 4 show the concentration of cows in the district. Figure 1 includes all milk cows in herds with 3 or more dairy cattle. Figure 2 shows plainly the influence of the Toledo fluid milk market. Figures 3 and 4 show the comparatively even distribution of the sale of milk and butterfat for manufacturing except in Lucas and Wood Counties

Table 8. Number of Dairy Farms and Number of Milk Cattle, by Market Outlet
12 Northwestern Ohio Counties, 1940

| County | Producer Distributor | | Fluid to Distributor | | Fluid for Manufacture | | Butterfat | | Not Classified | | Total | |
|----------|----------------------|--------|----------------------|--------|-----------------------|--------|-----------|--------|----------------|--------|--------|---------|
| | Farms | Cattle | Farms | Cattle | Farms | Cattle | Farms | Cattle | Farms | Cattle | Farms | Cattle |
| Defiance | 6 | 82 | 33 | 464 | 1,139 | 9,817 | 342 | 2,621 | 42 | 253 | 1,562 | 13,237 |
| Fulton | 14 | 249 | 409 | 5,756 | 1,437 | 12,352 | 207 | 1,581 | 30 | 193 | 2,097 | 20,131 |
| Hancock | 29 | 445 | 274 | 3,130 | 983 | 9,056 | 1,062 | 9,176 | 46 | 264 | 2,394 | 22,071 |
| Henry | 12 | 151 | 52 | 563 | 1,251 | 8,698 | 561 | 3,780 | 27 | 148 | 1,903 | 13,340 |
| Lucas | 45 | 449 | 203 | 1,721 | 119 | 757 | 155 | 858 | 40 | 157 | 562 | 3,942 |
| Ottawa | 35 | 496 | 340 | 3,674 | 341 | 2,350 | 234 | 1,393 | 33 | 158 | 983 | 8,071 |
| Paulding | 19 | 279 | 36 | 332 | 755 | 5,811 | 489 | 3,221 | 46 | 208 | 1,345 | 9,851 |
| Putnam | 13 | 107 | 142 | 1,153 | 1,165 | 9,487 | 791 | 5,845 | 35 | 213 | 2,146 | 16,805 |
| Sandusky | 31 | 470 | 541 | 6,133 | 603 | 5,262 | 480 | 3,477 | 54 | 317 | 1,709 | 15,659 |
| Seneca | 56 | 834 | 411 | 6,036 | 658 | 6,682 | 1,080 | 8,917 | 29 | 191 | 2,234 | 22,660 |
| Williams | 15 | 176 | 39 | 597 | 1,077 | 10,459 | 724 | 6,364 | 39 | 272 | 1,894 | 17,868 |
| Wood | 53 | 749 | 919 | 7,242 | 376 | 2,544 | 779 | 4,727 | 58 | 268 | 2,185 | 15,530 |
| Total | 328 | 4,487 | 3,399 | 36,801 | 9,904 | 83,275 | 6,904 | 51,960 | 479 | 2,642 | 21,014 | 179,165 |

Table 9. Number of Dairy Farms and Milk Cattle, and Per cent of Each by Market Outlet,
12 Northwestern Ohio Counties, 1940

| County | Total Number of Farms | Total Number of Milk Cattle | For Fluid Consumption | | Fluid for Manufacture | | Butterfat | | Not Classified | |
|----------|-----------------------|-----------------------------|-----------------------|-------------|-----------------------|-------------|------------|-------------|----------------|-------------|
| | | | Farms pct. | Cattle pct. | Farms pct. | Cattle pct. | Farms pct. | Cattle pct. | Farms pct. | Cattle pct. |
| Defiance | 1562 | 13,237 | 2.5 | 4.1 | 72.9 | 74.2 | 21.9 | 19.8 | 2.7 | 1.9 |
| Fulton | 2097 | 20,131 | 20.2 | 29.8 | 68.5 | 61.4 | 9.9 | 7.9 | 1.4 | .9 |
| Hancock | 2394 | 22,071 | 12.6 | 16.2 | 41.1 | 41.0 | 44.4 | 41.6 | 1.9 | 1.2 |
| Henry | 1903 | 13,340 | 3.3 | 5.3 | 65.8 | 65.2 | 29.5 | 28.4 | 1.4 | 1.1 |
| Lucas | 562 | 3,942 | 44.1 | 55.0 | 21.2 | 19.2 | 27.6 | 21.8 | 7.1 | 4.0 |
| Ottawa | 983 | 8,071 | 38.2 | 51.6 | 34.7 | 29.1 | 23.8 | 17.3 | 3.3 | 2.0 |
| Paulding | 1345 | 9,851 | 4.1 | 6.2 | 56.1 | 59.0 | 36.4 | 32.7 | 3.4 | 2.1 |
| Putnam | 2146 | 16,805 | 7.2 | 7.5 | 54.3 | 56.4 | 36.9 | 34.8 | 1.6 | 1.3 |
| Sandusky | 1709 | 15,659 | 33.5 | 42.2 | 35.3 | 33.6 | 28.0 | 22.2 | 3.2 | 2.0 |
| Seneca | 2234 | 22,660 | 20.9 | 30.3 | 29.5 | 29.5 | 43.3 | 39.4 | 1.3 | .8 |
| Williams | 1894 | 17,868 | 2.8 | 4.3 | 56.9 | 58.6 | 38.3 | 35.6 | 2.0 | 1.5 |
| Woods | 2185 | 15,530 | 44.4 | 51.4 | 17.2 | 16.5 | 35.7 | 30.4 | 2.7 | 1.7 |
| Total | 21014 | 179,165 | 17.7 | 23.0 | 47.1 | 46.5 | 32.9 | 29.0 | 2.3 | 1.5 |

Table 10. Number of Milk Cattle per Farm by Market Outlet,
12 Northwestern Ohio Counties, 1940

| County | Producer Distributor | Fluid to Distributor | Fluid for Manufacture | Butterfat | Not Classified | Total |
|----------|-------------------------|-------------------------|--------------------------|-----------|-------------------|-------|
| Defiance | 13.7 | 14.1 | 8.6 | 7.7 | 6.0 | 8.5 |
| Fulton | 17.8 | 14.1 | 8.6 | 7.6 | 6.4 | 9.6 |
| Hancock | 15.3 | 11.4 | 9.2 | 8.6 | 5.7 | 9.2 |
| Henry | 12.6 | 10.8 | 7.0 | 6.7 | 5.5 | 7.0 |
| Lucas | 10.0 | 8.5 | 6.4 | 5.5 | 3.9 | 7.0 |
| Ottawa | 14.2 | 10.8 | 6.9 | 6.0 | 4.8 | 8.2 |
| Paulding | 14.7 | 9.2 | 7.7 | 6.6 | 4.5 | 7.3 |
| Putnam | 8.2 | 8.1 | 8.1 | 7.4 | 6.1 | 7.8 |
| Sandusky | 15.2 | 11.3 | 8.7 | 8.2 | 5.9 | 9.2 |
| Seneca | 14.9 | 14.7 | 10.1 | 8.3 | 6.6 | 10.1 |
| Williams | 11.7 | 15.3 | 9.7 | 8.8 | 7.0 | 9.4 |
| Wood | 14.1 | 7.9 | 6.8 | 6.1 | 4.6 | 7.1 |
| Total | 13.7 | 10.8 | 8.4 | 7.5 | 5.5 | 8.5 |

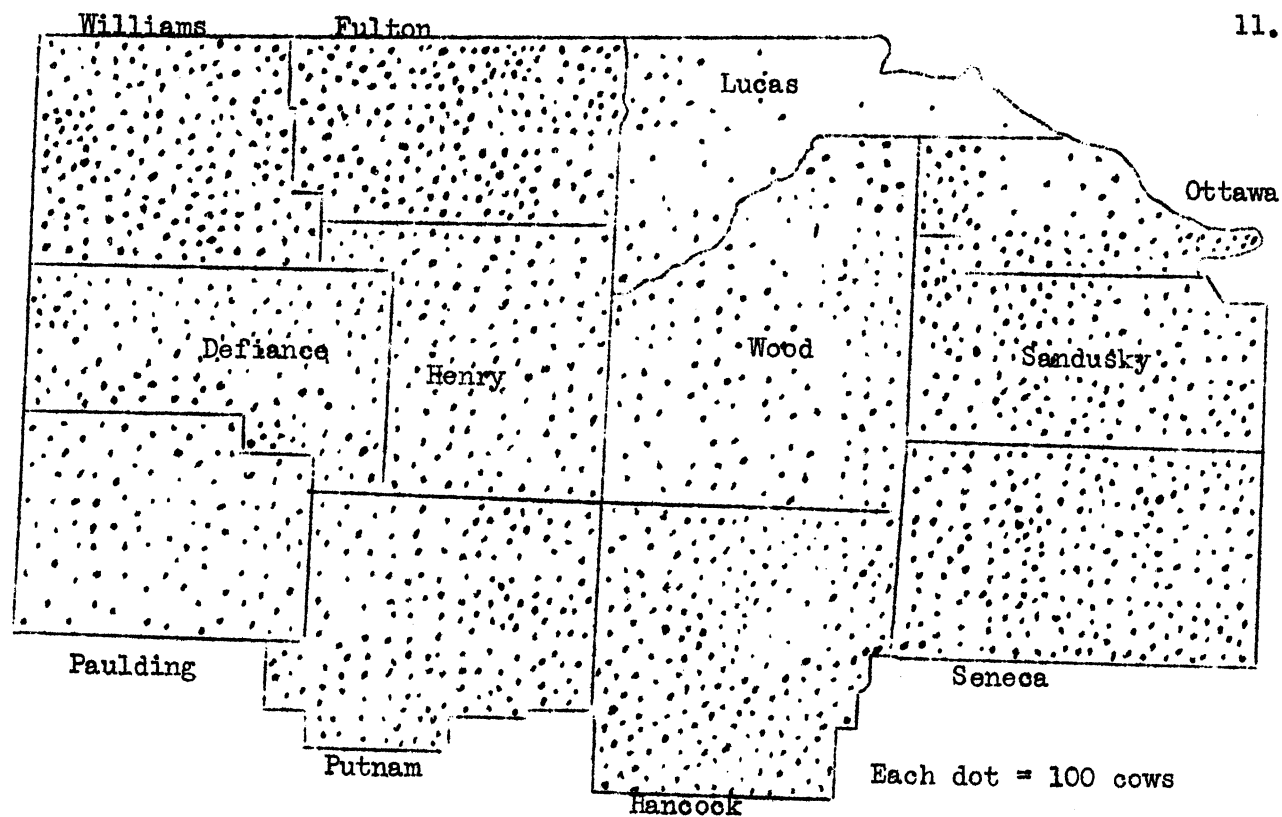


Figure 1. Cows Kept for Sale of all Dairy Products

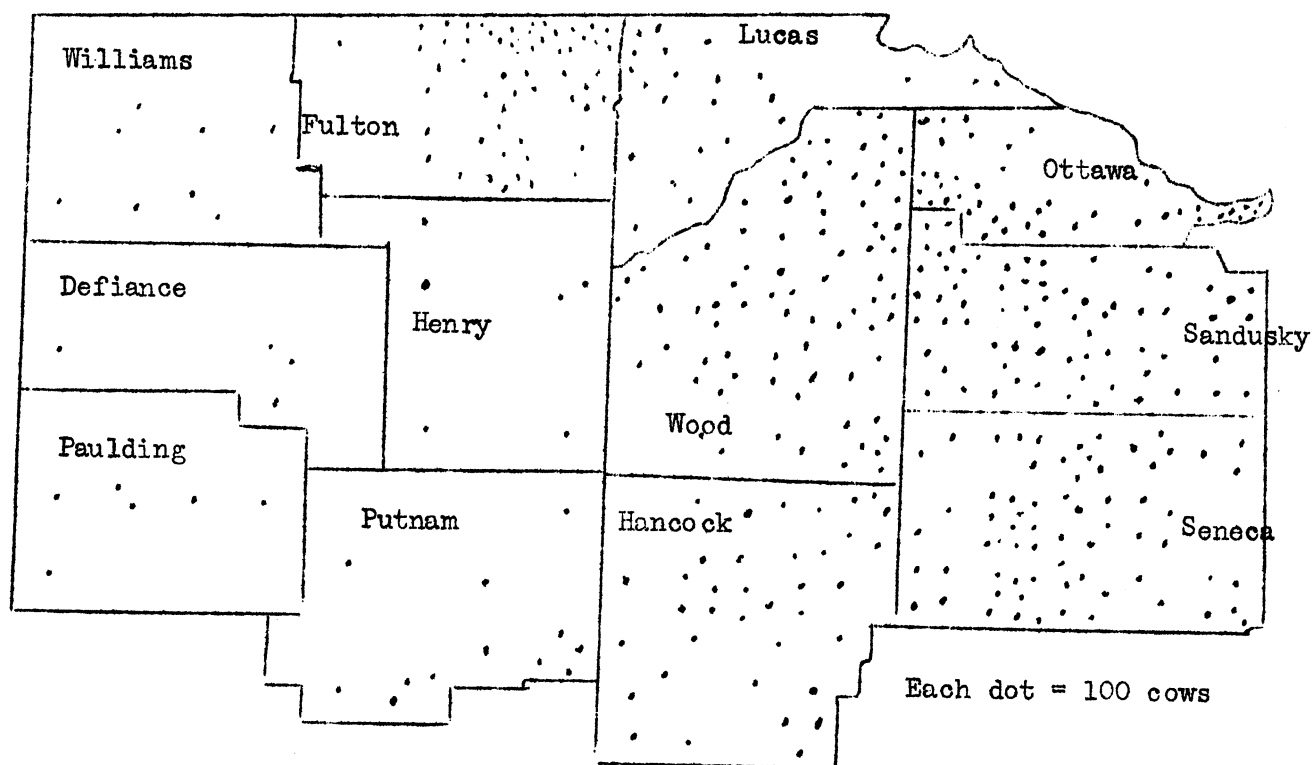


Figure 2. Cows Kept for Sale of Milk for Fluid Consumption

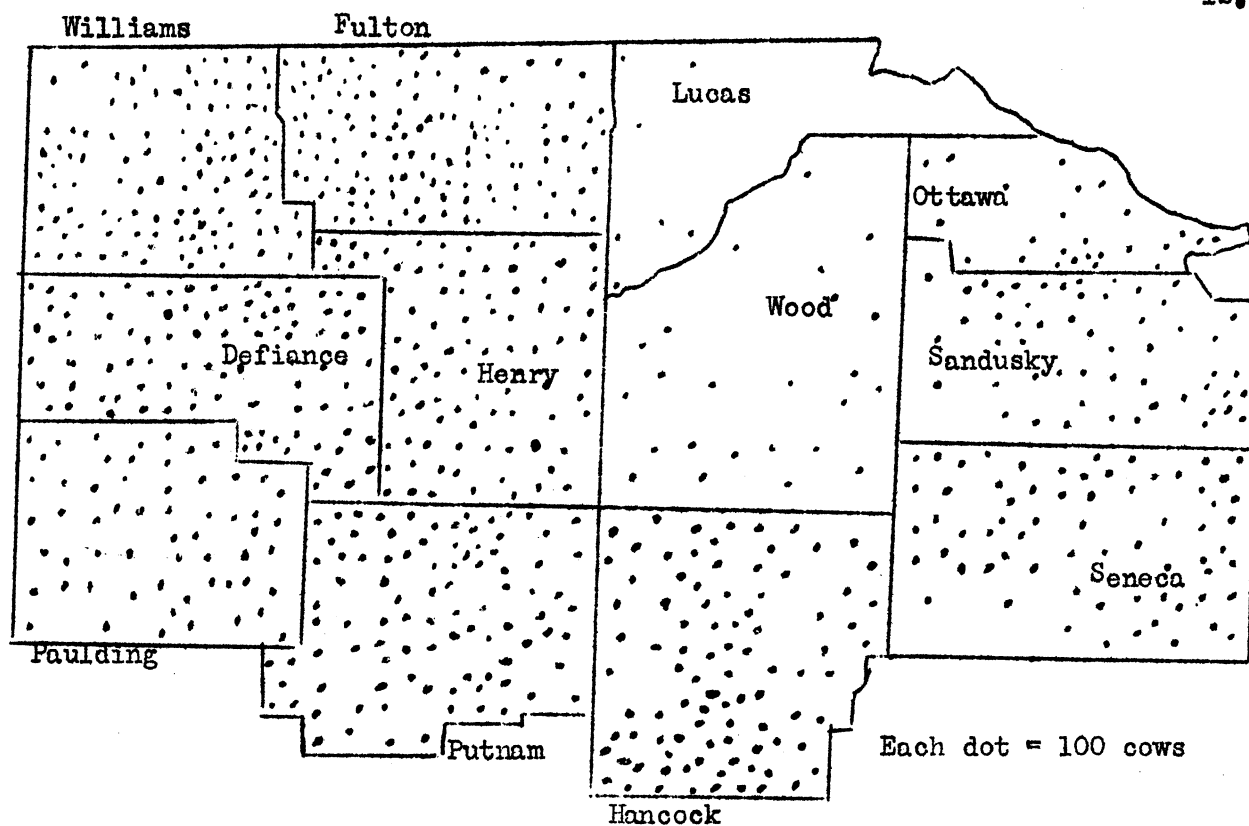


Figure 3. Cows Kept for Sale of Fluid Milk for Manufacture

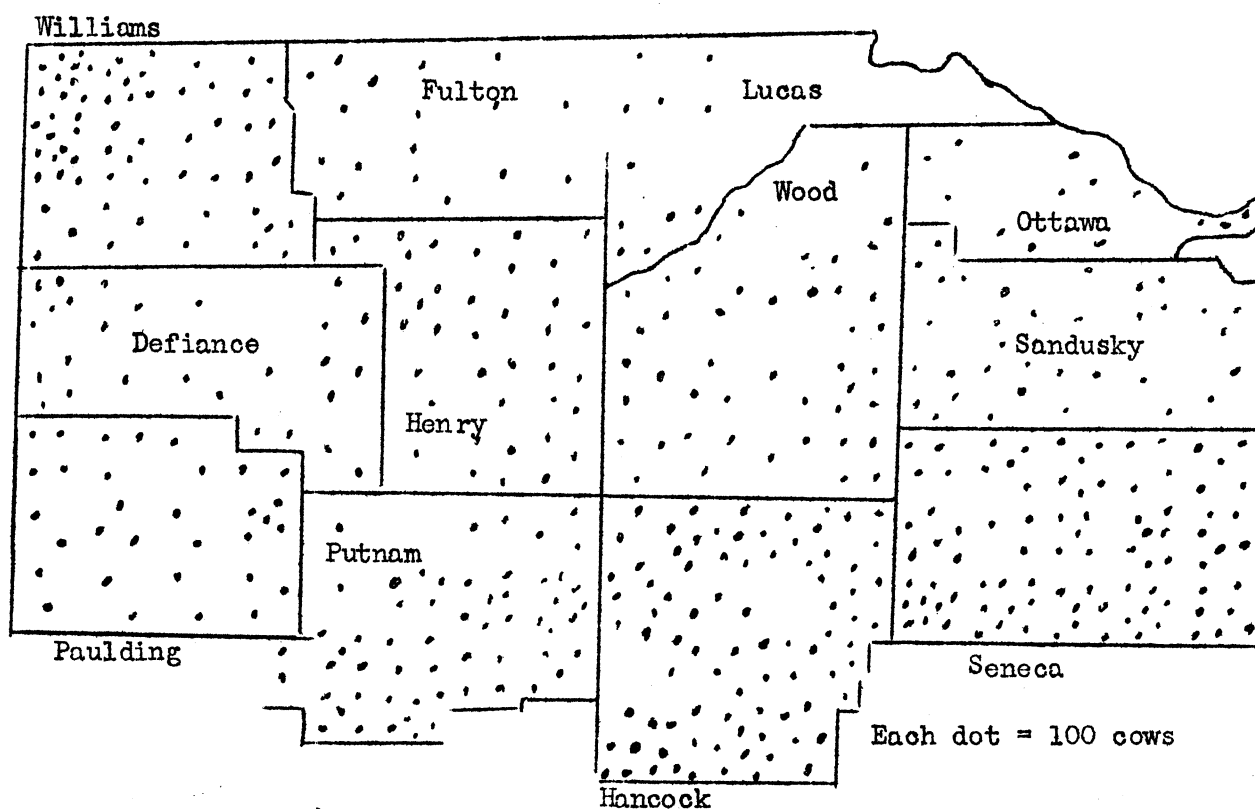


Figure 4. Cows Kept for Sale of Butterfat

Defiance County:

This county led the area in the predominance of farms selling into manufacturing plants. Table 12 shows that approximately 73 per cent of the farms and 74 per cent of the cattle were in this classification. The requirements for fresh milk distribution were met by 2.5 per cent of the farms and 4.1 per cent of the dairy cattle. Butterfat sales accounted for approximately 20 per cent of the cattle. There was, however, no township in which butterfat outlets accounted for the product of as much as 40 per cent of the cattle.

There was no general enforcement of sanitary regulations covering the county.

The distribution of fresh milk was divided among a small number of distributors and a somewhat larger number of producer-distributors. There were 29 producer-distributors licensed by the Ohio Milk Marketing Commission in 1935. In this survey 5 of these were reported as in business in 1940. Six additional farms were listed as producer distributors by those who reported, making a total of 11 for the county.

The following firms were listed as distributors and manufacturers:

Milk Distributors

Defiance Dairy Co., Defiance
Hicksville Dairy, Hicksville
Ray W. McConley, Hicksville
White Mountain Creamery, Lima

Manufacturing Plants

Defiance Milk Prod. Co., Defiance, Evap. Milk
Gray and White Co., Defiance, Butter
Swift and Company, Defiance, Butter
Hicksville Creamery, Hicksville, Misc.

Table 12. Number of Dairy Farms and Milk Cattle, and Per Cent of Each by Market Outlet, Defiance County

| Township | Total Number of Farms | Total Number of Milk Cattle | For Fluid Consumption | | Fluid for Manufacture | | Butterfat | | Not Classified | |
|------------|--------------------------------|--------------------------------------|--------------------------|----------------|--------------------------|----------------|--------------|----------------|----------------|----------------|
| | | | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. |
| Adams | 165 | 1247 | 3.0 | 3.2 | 66.1 | 67.1 | 26.7 | 26.7 | 4.2 | 3.0 |
| Defiance | 123 | 1004 | 4.8 | 9.2 | 72.4 | 71.0 | 18.7 | 17.4 | 4.1 | 2.4 |
| Dolaware | 128 | 1021 | 0.8 | 0.8 | 78.9 | 76.6 | 20.3 | 22.6 | --- | --- |
| Farmer | 120 | 1009 | 0.8 | 0.4 | 69.2 | 70.6 | 28.3 | 27.1 | 1.7 | 1.9 |
| Hicksville | 149 | 1161 | 4.7 | 6.2 | 51.7 | 55.9 | 38.9 | 35.7 | 4.7 | 2.2 |
| Highland | 150 | 979 | 0.7 | 1.8 | 80.7 | 80.2 | 16.0 | 16.5 | 2.6 | 1.5 |
| Mark | 132 | 917 | 2.3 | 1.4 | 85.6 | 88.1 | 8.3 | 7.0 | 3.8 | 3.5 |
| Milford | 162 | 1452 | --- | --- | 67.9 | 65.5 | 32.1 | 34.5 | --- | --- |
| Noble | 76 | 828 | 7.9 | 26.4 | 76.3 | 64.5 | 11.8 | 6.8 | 4.0 | 2.3 |
| Richland | 153 | 1117 | 2.6 | 3.6 | 66.0 | 66.8 | 26.1 | 23.2 | 5.3 | 6.4 |
| Tiffin | 153 | 1279 | 0.6 | 0.2 | 97.4 | 98.5 | 2.0 | 1.3 | --- | --- |
| Washington | 51 | 1223 | 7.8 | 3.0 | 54.9 | 85.0 | 35.3 | 11.3 | 2.0 | 0.7 |
| County | 1562 | 13237 | 2.5 | 4.1 | 72.9 | 74.2 | 21.9 | 19.8 | 2.7 | 1.9 |

Fulton County:

Fulton ranks next to Defiance County in percentage of farms and cattle falling in the manufacturing classification. Table 13 shows 68.5 per cent of the farms but only 61.4 per cent of the cattle in this classification. The fluid consumption outlet with 20.2 per cent of the farmers and 29.8 per cent of the cattle attracted the larger dairy herds. Less than 10 per cent of the farms and cattle fell in the butterfat outlet.

There were no milk regulations by health boards in effect throughout the county.

The dairy plant directories showed only 2 firms as milk distributors. Most of the sales for fluid consumption are by producer-distributors. In 1935 there were 36 dairies licensed as producer-distributors. Of these 6 were reported in business in 1940. In addition 6 more farms were reported in this classification in 1940, making a total of 12 for the county.

The distributors and manufacturers were:

Milk Distributors

Decker Dairy, Wauseon, R. #4
Sterling Creamery Co., Wauseon*

Manufacturing Plants

VanCamp Packing Co., Wauseon, Evap. Milk
W. Graham Cheese Factory, Fayette,
Am. Cheese
Helvetia Milk Condensing Co., Delta,
Cond. and Evap. Milk
Pet Milk Co., Delta, Cond. & Evap. Milk

Table 13. Number of Dairy Farms and Milk Cattle, and Per Cent of Each by Market Outlet, Fulton County

| Township | Total Number of Farms | Total Number of Milk Cattle | For Fluid Consumption | | Fluid for Manufacture | | Butterfat | | Not Classified | |
|--------------|--------------------------------|--------------------------------------|--------------------------|----------------|--------------------------|----------------|--------------|----------------|----------------|----------------|
| | | | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. |
| Amboy | 134 | 1213 | 72.4 | 81.1 | 25.4 | 17.5 | 2.2 | 1.4 | --- | --- |
| Chesterfield | 142 | 1705 | 34.5 | 45.1 | 59.2 | 49.5 | 4.9 | 4.2 | 1.4 | 1.2 |
| Clinton | 248 | 2245 | 7.2 | 13.5 | 75.8 | 71.9 | 14.1 | 13.1 | 2.9 | 1.5 |
| Dover | 123 | 1114 | 3.3 | 5.9 | 88.6 | 86.9 | 6.5 | 5.5 | 1.6 | 1.7 |
| Franklin | 129 | 1184 | 0.8 | 3.5 | 87.6 | 88.5 | 10.0 | 7.4 | 1.6 | .6 |
| Fulton | 166 | 1496 | 28.9 | 41.3 | 63.9 | 52.7 | 6.6 | 5.5 | .6 | .5 |
| German | 262 | 2188 | 2.7 | 2.2 | 82.4 | 84.9 | 14.9 | 12.9 | --- | --- |
| Gorham | 193 | 1994 | 4.1 | 5.1 | 76.8 | 76.3 | 17.1 | 16.8 | 2.0 | 1.8 |
| Pike | 164 | 1639 | 26.2 | 36.5 | 65.8 | 57.1 | 5.5 | 4.5 | 2.5 | 1.9 |
| Royalton | 121 | 1803 | 57.0 | 76.7 | 30.6 | 17.4 | 12.4 | 5.9 | --- | --- |
| Swan Creek | 182 | 1230 | 8.2 | 14.6 | 75.3 | 73.9 | 14.3 | 10.0 | 2.2 | 1.5 |
| York | 233 | 2320 | 27.5 | 39.2 | 67.4 | 57.8 | 3.4 | 2.2 | 1.7 | .8 |
| County | 2097 | 20131 | 20.2 | 29.8 | 68.5 | 61.4 | 9.9 | 7.9 | 1.4 | .9 |

*Also listed as a manufacturer.

Hancock County:

This is one of the two counties in the area in which a higher percentage of farms and dairy cattle were classified in butterfat sales than in any other outlet. As shown in Table 14 the butterfat outlet drew a slightly larger percentage than did milk for manufacture. It is evident from the distribution of farms and cattle that the farms going to fluid for consumption are the larger ones. In this outlet 12.6 per cent of the farms accounted for 16.2 per cent of the dairy cattle.

There was no pronounced concentration in any one outlet nor by townships. A close examination of Table 14 reveals that there was no township in the county where as much as 70 per cent of the cattle were classified in a single outlet.

Sanitary regulations were not in operation either by county or city health districts.

Milk distribution for fluid consumption was largely by producer-distributors. There were 37 producer-distributors licensed under the Burk Act in 1935. Six of these were found in business in the 1940 survey. Those reporting added the names of 18 producer-distributors who were not licensed as such in 1935.

The distributing and manufacturing plants were:

Milk Distributors

The Page Dairy Co., Findlay
 San-A-Pure Dairy, Findlay
 Hill Top Dairy, Findlay
 J. Edmidson Dairy, Findlay
 Rudolph

The Page Dairy Company and San-A-Pure Dairy were also listed as manufacturers.

The Findlay Board of Health gave the following as producer-distributors:

| | |
|--------------------|--------------|
| Loveridge & Miller | Clark Miller |
| L. L. King | George Brown |
| Glenn Roberts | Ellis Dairy |

The first three were licensed in 1935 as distributors because they were purchasing a part of the milk they distributed.

Manufacturing Plants

Arcadia Creamery, Arcadia Butter
 Findlay Evaporated Milk Company, Findlay, Evaporated Milk

Table 14. Number of Dairy Farms and Milk Cattle, and Per Cent of Each by Market Outlet, Hancock County

| Township | Total Number of Farms | Total Number of Milk Cattle | For Fluid Consumption | | Fluid for Manufacture | | Butterfat | | Not Classified | |
|------------|--------------------------------|--------------------------------------|--------------------------|----------------|--------------------------|----------------|--------------|----------------|-------------------|----------------|
| | | | Farm pet. | Cattle pet. | Farm pet. | Cattle pet. | Farm pet. | Cattle pet. | Farm pet. | Cattle pet. |
| Allon | 118 | 979 | 4.2 | 7.6 | 32.2 | 35.2 | 63.6 | 57.2 | --- | --- |
| Amanda | 116 | 1004 | 17.3 | 20.2 | 20.7 | 21.2 | 60.3 | 57.6 | 1.7 | 1.0 |
| Biglick | 144 | 1522 | 4.2 | 7.2 | 34.7 | 38.4 | 59.0 | 53.5 | 2.1 | .9 |
| Blanchard | 144 | 1173 | 7.0 | 5.1 | 26.4 | 30.2 | 66.6 | 64.7 | --- | --- |
| Cass | 112 | 1006 | 8.9 | 12.5 | 38.4 | 42.1 | 52.7 | 45.4 | --- | --- |
| Dolawaro | 148 | 1352 | 16.8 | 21.4 | 37.2 | 35.3 | 40.6 | 38.8 | 5.4 | 4.5 |
| Eagle | 176 | 1739 | 2.8 | 4.2 | 62.0 | 63.5 | 34.1 | 31.5 | 1.1 | .8 |
| Jackson | 146 | 1263 | 8.9 | 12.3 | 38.4 | 41.2 | 52.7 | 46.5 | --- | --- |
| Liberty | 157 | 1433 | 33.1 | 37.1 | 42.8 | 36.1 | 23.5 | 26.2 | 0.6 | 0.6 |
| Madison | 148 | 1380 | 2.0 | 2.3 | 51.4 | 48.7 | 43.9 | 47.5 | 2.7 | 1.5 |
| Marion | 138 | 1554 | 35.5 | 47.2 | 54.3 | 44.8 | 10.2 | 8.0 | --- | --- |
| Orange | 186 | 1798 | 1.1 | 1.8 | 57.5 | 54.1 | 39.8 | 42.9 | 1.6 | 1.2 |
| Pleasant | 144 | 952 | 2.1 | 1.8 | 54.2 | 59.2 | 40.3 | 36.7 | 3.4 | 2.3 |
| Portago | 106 | 896 | 3.8 | 7.8 | 46.2 | 53.1 | 41.5 | 33.2 | 3.5 | 5.9 |
| Union | 142 | 1472 | 14.1 | 17.2 | 21.1 | 20.8 | 62.7 | 61.1 | 2.1 | 0.9 |
| Van Buren | 111 | 1117 | 3.6 | 6.7 | 64.0 | 60.9 | 32.4 | 32.4 | --- | --- |
| Washington | 158 | 1431 | 45.6 | 51.6 | 10.7 | 10.8 | 39.9 | 35.8 | 3.8 | 1.8 |
| County | 2394 | 22071 | 12.6 | 16.2 | 41.1 | 41.0 | 44.4 | 41.6 | 1.9 | 1.2 |

Henry County:

This county stood second in the 12 in the percentage of farms and dairy cattle classified in the manufacturing outlet. Table 15 shows over 65 per cent as going to manufacturing plants. Approximately 3 per cent of the farms and 5 per cent of the dairy cattle were required to supply the fresh milk requirements of the milk purchasing population. There were somewhat less than half as many farms selling butterfat as those selling milk for manufacture.

Three townships, Pleasant, Flatrock, and Ridgerville, had over 75 of the farms in manufacturing outlets. In the butterfat outlet the greatest concentration was in Bartlow, Napoleon, Freedom, and Richfield Townships.

Henry County was operating at the time of the study under the U. S. Public Health Standard Ordinance.

The distributors and manufacturers were:

Milk Distributors

Napoleon Creamery Co., Napoleon
Penny's Dairy, Napoleon
Fruth's Dairy, Napoleon
Meadow Cold Creamery, Napoleon
Ward Ensign, Holgate

Pure Milk Dairy, Doshlor
Mrs. George Yokes, Holgate
Mrs. Anna Gaatiard, Napoleon
Edw. P. Gilliland, Napoleon
A. A. Jackson, Napoleon
West End Dairy, Napoleon

Napoleon Creamery and Meadow Gold Creameries were also listed as manufacturers. In addition to these there were:

Koppenhofer Bros., Doshler, Butter
Holgate Produce Company, Holgate, Miss.
Pot Milk Company, Holgate, Evaporated Milk

Producer-distributors accounted for a considerable percentage of distribution. In 1935 there were 26 licensed and of these 6 were reported in business in 1940. Reporters added 10 new producer distributors in the 1940 survey, making a total of 16 recorded by the survey.

Table 15. Number of Dairy Farms and Milk Cattle and Per Cent of Each by Market Outlet, Henry County

| Township | Total Number of Farms | Total Number of Milk Cattle | For Fluid Consumption | | Fluid for Manufacture | | Butterfat | | Not Classified | |
|------------|--------------------------------|--------------------------------------|--------------------------|----------------|--------------------------|----------------|--------------|----------------|-------------------|----------------|
| | | | Farm pet. | Cattle pet. | Farm pet. | Cattle pet. | Farm pet. | Cattle pet. | Farm pet. | Cattle pet. |
| Bartlow | 140 | 894 | 7.8 | 15.1 | 54.3 | 51.3 | 37.9 | 33.6 | --- | --- |
| Damascus | 172 | 1188 | 7.6 | 15.6 | 52.3 | 50.4 | 34.9 | 29.1 | 5.2 | 4.9 |
| Flatcreek | 168 | 1068 | 1.2 | 1.0 | 78.6 | 82.2 | 19.6 | 16.5 | .6 | 0.3 |
| Freedom | 125 | 1010 | 7.2 | 9.1 | 55.2 | 57.4 | 37.6 | 33.5 | --- | --- |
| Harrison | 124 | 882 | .8 | 0.8 | 71.8 | 70.9 | 27.4 | 28.3 | --- | --- |
| Liberty | 158 | 1180 | 1.2 | 1.3 | 69.0 | 69.1 | 26.6 | 27.3 | 3.2 | 2.3 |
| Marion | 163 | 1115 | 1.8 | 1.5 | 62.0 | 63.5 | 33.7 | 33.1 | 2.5 | 1.9 |
| Monroe | 173 | 1063 | 1.7 | 1.6 | 63.6 | 64.8 | 33.0 | 32.0 | 1.7 | 1.6 |
| Napoleon | 145 | 1261 | 6.8 | 11.3 | 53.9 | 51.7 | 37.9 | 36.1 | 1.4 | 0.9 |
| Pleasant | 173 | 1065 | 3.4 | 5.4 | 90.8 | 87.7 | 5.8 | 6.9 | --- | --- |
| Richfield | 127 | 850 | 2.4 | 3.3 | 55.1 | 55.2 | 42.5 | 41.5 | --- | --- |
| Ridgeville | 130 | 946 | 0.8 | 0.5 | 76.2 | 77.1 | 23.0 | 22.4 | --- | --- |
| Washington | 105 | 818 | --- | --- | 67.6 | 68.7 | 29.5 | 30.0 | 2.9 | 1.3 |
| County | 1903 | 13340 | 3.3 | 5.3 | 65.8 | 65.2 | 29.5 | 28.4 | 1.4 | 1.1 |

Lucas County:

This county was found to be affected in its dairy production to a great extent by Toledo. It contained only 562 farms on which 3 or more dairy cattle were tested and the total number of cattle tested was only 3942.

The county had the largest percentage of farms and cattle going into the fluid consumption outlet. There were seven townships as shown in Table 16 in which more than 70 percent of the cattle were classified as in the fluid consumption outlet. Providence, however, the township with the largest number of cattle tested, had 54.4 per cent of those in the butterfat outlet and Waterville, next in number of cattle, had 42 per cent in manufacturing milk and 27 per cent in butterfat.

The City of Toledo has for many years maintained a rigid inspection of farms supplying milk for that market. Within the past year a revision was made in the ordinance which established the sanitary standard on a basis equivalent to the U. S. Public Health Service standard ordinance.

Producer-distributors were found to be operating in considerable numbers. In 1935 there were 34 licensed under the Burk Act. In the survey for this study only 4 of these were reported as producer-distributors. There were, however, 15 new names added by those reporting making a total for the county of 19. Some of these sell from the farms only to customers who come for the milk.

Distributors were as follows:

| | |
|-----------------------------|-----------------------|
| D. H. Anderson | Page Dairy* |
| Babcock Dairy | Peoples Dairy |
| Cherry Grove Dairy* | Poplar Farms Dairy |
| Degner Bros.* | Schiffort Bros. Dairy |
| Driggs Dairy* | Sutherland Dairy |
| Homewood Dairy | Trilby Farm Dairy |
| Jameson Dairy | Villago Farm Dairy |
| Jersey Farms Dairy | Consumers Dairy Co. |
| Kroger Grocery & Baking Co. | Dolgin Dairy |
| Ludwig Lane Dairy* | Fernwood Dairy |
| Manhattan Dairy | Mainert Company |
| Muenzer Dairy | Sunrise Dairy |
| Ohio Cloverleaf Dairy* | |

*These dairies were also listed as manufacturers. In addition there were in manufacturing:

Franklin Creamery Company
Ward Milk Products Company

Table 16. Number of Dairy Farms and Milk Cattle, and Per Cent of Each by Market Outlet, Lucas County

| Township | Total Number of Farms | Total Number of Milk Cattle | For Fluid Consumption | | Fluid for Manufacture | | Butterfat | | Not Classified | |
|----------------------|--------------------------------|--------------------------------------|--------------------------|----------------|--------------------------|----------------|--------------|----------------|-------------------|----------------|
| | | | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. |
| Adams | 24 | 287 | 70.8 | 88.8 | --- | --- | 8.3 | 4.5 | 20.9 | 6.7 |
| Jerusalem | 39 | 270 | 56.4 | 71.9 | 20.5 | 12.2 | 23.1 | 15.9 | --- | --- |
| Monclava | 35 | 219 | 85.7 | 88.6 | --- | --- | 14.3 | 11.4 | --- | --- |
| Oregon | 32 | 195 | 53.1 | 72.8 | 3.2 | 4.6 | 6.2 | 3.1 | 37.5 | 19.5 |
| Providencia | 106 | 585 | 8.4 | 9.3 | 26.5 | 32.3 | 60.4 | 54.4 | 4.7 | 4.0 |
| Richfield | 71 | 530 | 69.0 | 73.4 | 22.5 | 17.2 | 8.5 | 9.4 | --- | --- |
| Spencer & Harding | 64 | 531 | 53.1 | 68.0 | 23.5 | 17.1 | 14.0 | 9.8 | 9.4 | 5.1 |
| Springfield | 39 | 255 | 64.1 | 72.5 | --- | --- | 23.1 | 21.2 | 12.8 | 6.3 |
| Swanton | 31 | 206 | 54.8 | 54.8 | 12.9 | 13.6 | 32.3 | 31.6 | --- | --- |
| Sylvania | 44 | 295 | 31.8 | 44.0 | 29.6 | 25.8 | 31.8 | 27.1 | 6.8 | 3.1 |
| Washington | | | ALL IN HOME USE | | | | | | | |
| Waterville | 77 | 569 | 18.2 | 26.7 | 44.1 | 42.2 | 32.5 | 26.7 | 5.2 | 4.4 |
| County | 562 | 3942 | 44.1 | 55.0 | 21.2 | 19.2 | 27.6 | 21.8 | 7.1 | 4.0 |

Ottawa County:

This is one of the small counties of the group. It had 983 farms with 3 or more dairy cattle tested and a total of 8071 cattle tested in such herds. It does not have a very intensive dairy industry. As indicated in Table 17, the farms with the larger herds are in the fluid consumption outlet. Only 38.2 per cent of the farms but 51.6 per cent of the cattle were so classified. Clay township had 87.9 per cent of cattle in this classification.

Ottawa County was operating in 1940 under the U. S. Health Service Standard Ordinance.

The milk distribution was largely in the hands of producer-distributors. In 1935 there were 28 under license. Of these 8 were reported as in business at the time of the survey. Those reporting in this study listed 23 additional making a total for the county in 1940 of 31.

The distributors operating in 1940 were:

Blue Spring Dairy, Gypsum
Roy E. Barnos, Rocky Ridge
Walter Coon, Curtice
A. E. Kirk & Sons, Port Clinton

Lakeshore Dairy, Port Clinton, was listed as both distributor and manufacturer. Hockin Dairy of Oak Harbor was manufacturing butter.

Table 17. Number of Dairy Farms and Milk Cattle, and Per Cent of Each by Market Outlet, Ottawa County

| Township | Total Number of Farms | Total Number of Milk Cattle | For Fluid Consumption | | Fluid for Manufacture | | Butterfat | | Not Classified | |
|----------|--------------------------------|--------------------------------------|--------------------------|----------------|--------------------------|----------------|--------------|----------------|-------------------|----------------|
| | | | Farm pet. | Cattle pet. | Farm pet. | Cattle pet. | Farm pet. | Cattle pet. | Farm pet. | Cattle pet. |
| Allon | 118 | 945 | 54.2 | 57.4 | 22.9 | 19.7 | 17.0 | 20.6 | 5.9 | 2.3 |
| Bay | 54 | 601 | 33.3 | 47.4 | 53.7 | 43.1 | 3.7 | 4.0 | 9.3 | 5.5 |
| Benton | 55 | 390 | 63.7 | 68.7 | 29.0 | 23.6 | 7.3 | 7.7 | --- | --- |
| Carrol | 126 | 655 | 0.8 | 3.7 | 56.3 | 57.7 | 42.9 | 38.6 | --- | --- |
| Clay | 117 | 1261 | 78.6 | 87.9 | 7.7 | 4.5 | 11.1 | 6.6 | 2.6 | 1.0 |
| Danbury | 114 | 1076 | 30.7 | 58.9 | 19.3 | 15.5 | 44.7 | 23.8 | 5.3 | 1.8 |
| Harris | 135 | 1296 | 57.8 | 63.3 | 23.0 | 21.2 | 18.5 | 13.8 | 0.7 | 1.7 |
| Erie | 34 | 308 | 14.7 | 17.2 | 38.3 | 48.4 | 38.2 | 29.2 | 8.8 | 5.2 |
| Portago | 36 | 295 | 52.8 | 65.8 | 16.7 | 17.3 | 25.0 | 13.9 | 5.5 | 3.0 |
| Salom | 194 | 1244 | 14.5 | 19.6 | 60.3 | 59.2 | 22.2 | 19.4 | 3.0 | 1.8 |
| County | 983 | 8071 | 38.2 | 51.6 | 34.7 | 29.1 | 23.8 | 17.3 | 3.3 | 2.0 |

Paulding County:

This county is about the average of the area as to the balance between milk for manufacture and the butterfat outlet. Table 18 shows that the product of 56 per cent of the farms and 59 per cent of the cattle tested is going to manufacturing outlets and 36.4 per cent of the farms with 32.7 per cent of the cattle to butterfat. As was generally found, the larger farms were selling to the evaporating plants.

There were no sanitary regulations by county or city health districts in effect in 1940.

Distribution was wholly by producer-distributors. In 1935 there were 31 licensed under the Burk Act. In 1940 there were 6 of these in business. Those reporting listed 14 additional names in 1940 making a total of 20 for the county. There were no distributors and no manufacturing places listed in the directories.

Table 18. Number of Dairy Farms and Milk Cattle, and Per Cent of Each by Market Outlet, Paulding County

| Township | Total Number of Farms | Total Number of Milk Cattle | For Fluid Consumption | | Fluid for Manufacture | | Butterfat | | Not Classified | |
|------------|--------------------------------|--------------------------------------|--------------------------|--------|--------------------------|--------|-----------|--------|-------------------|--------|
| | | | Farm | Cattle | Farm | Cattle | Farm | Cattle | Farm | Cattle |
| | | | pct. | pct. | pct. | pct. | pct. | pct. | pct. | pct. |
| Auglase | 88 | 543 | --- | --- | 51.1 | 56.3 | 44.3 | 38.6 | 4.6 | 5.1 |
| Benton | 78 | 588 | 11.7 | 11.7 | 32.0 | 46.4 | 46.1 | 35.8 | 10.2 | 6.1 |
| Blue Creek | 82 | 578 | 6.0 | 7.6 | 59.8 | 59.3 | 30.6 | 30.9 | 3.6 | 2.2 |
| Brown | 172 | 1217 | 4.7 | 6.5 | 48.8 | 47.9 | 43.0 | 44.1 | 3.5 | 1.5 |
| Carryall | 126 | 985 | 3.8 | 4.4 | 37.3 | 48.3 | 54.8 | 45.1 | 4.1 | 2.2 |
| Crane | 119 | 964 | .8 | .4 | 65.6 | 64.6 | 33.6 | 35.0 | --- | --- |
| Emerald | 105 | 771 | --- | --- | 70.5 | 72.8 | 29.5 | 27.2 | --- | --- |
| Harrison | 98 | 612 | 6.1 | 9.0 | 61.3 | 60.4 | 29.6 | 28.8 | 3.0 | 1.8 |
| Jackson | 116 | 999 | 4.3 | 13.1 | 65.5 | 64.2 | 29.3 | 21.9 | .9 | .8 |
| Latty | 113 | 770 | 2.7 | 2.2 | 69.0 | 72.3 | 23.0 | 22.2 | 5.3 | 3.3 |
| Paulding | 116 | 898 | 11.2 | 18.7 | 47.4 | 50.9 | 36.2 | 28.0 | 5.2 | 2.4 |
| Washington | 132 | 926 | --- | --- | 63.6 | 67.5 | 33.4 | 29.6 | 3.0 | 2.9 |
| County | 1345 | 9851 | 4.1 | 6.2 | 56.1 | 59.0 | 36.4 | 32.7 | 3.4 | 2.1 |

Putnam County:

In this as in Paulding County the dairy production is divided between milk for manufacture and butterfat. Only 7.5 per cent of the cattle were required to meet fluid consumption demands.

Table 19 shows that approximately two farms go to manufacturing outlets to one that sells butterfat. There is, however, much variation as between townships. Palmer, Monroe, and Liberty Townships run very strongly to the manufacturing outlet while there are 4 townships, Blanchard, Jackson, Jennings, and Sugar Creek in which more than half go to butterfat.

There were no health board regulations in effect in this county.

Distribution was almost exclusively in the hands of producer-distributors. Only one distributor was listed, Plain View Dairy at Columbus Grove. In 1935 there were 58 producer-distributors licensed under the Burk Act. Only 8 of these were reported as producer-distributors in this survey. The reporters added only 5 additional names. It would appear that the survey failed to record all farms that sell some milk to consumers in this case. The experience in this case is out of line with other counties.

The manufacturers were:

Defiance Dairy Products Co., Columbus Grove
Grove Milk Co., Columbus Grove.

Table 19. Number of Dairy Farms and Milk Cattle, and Per Cent of Each by Market Outlet, Putnam County

| Township | Total Number of Farms | Total Number of Milk Cattle | For Fluid Consumption | | Fluid for Manufacture | | Butterfat | | Not Classified | |
|-------------|--------------------------------|--------------------------------------|-----------------------|----------------|-----------------------|----------------|--------------|----------------|----------------|----------------|
| | | | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. |
| Blanchard | 178 | 1496 | .6 | 1.4 | 42.1 | 46.9 | 55.6 | 50.8 | 1.7 | .9 |
| Greenburg | 122 | 1190 | --- | --- | 59.8 | 54.5 | 36.1 | 43.2 | 4.1 | 2.3 |
| Jackson | 124 | 830 | --- | --- | 38.7 | 40.8 | 58.9 | 55.8 | 2.4 | 3.4 |
| Jennings | 154 | 1048 | 6.5 | 5.3 | 35.1 | 41.2 | 57.1 | 52.1 | 1.3 | 1.4 |
| Liberty | 180 | 1469 | 1.7 | 2.4 | 79.4 | 85.5 | 18.9 | 12.1 | --- | --- |
| Monroe | 134 | 941 | 3.7 | 4.5 | 81.4 | 82.1 | 14.9 | 13.4 | --- | --- |
| Monterey | 114 | 737 | 2.6 | 2.2 | 58.8 | 63.1 | 36.0 | 32.7 | 2.6 | 2.0 |
| Ottawa | 170 | 1568 | 6.5 | 5.9 | 48.8 | 50.9 | 44.7 | 43.2 | --- | --- |
| Palmer | 128 | 901 | 0.8 | .3 | 90.6 | 90.8 | 4.7 | 4.8 | 3.9 | 4.1 |
| Perry | 89 | 665 | 24.7 | 20.6 | 48.3 | 60.0 | 27.0 | 19.4 | --- | --- |
| Pleasant | 178 | 1445 | 5.1 | 5.2 | 62.9 | 69.1 | 32.0 | 25.7 | --- | --- |
| Riley | 149 | 1118 | 29.5 | 32.0 | 29.5 | 30.1 | 41.0 | 37.9 | --- | --- |
| Sugar Creek | 160 | 1327 | 19.4 | 20.9 | 26.3 | 25.7 | 53.7 | 53.2 | 0.6 | .2 |
| Union | 132 | 1139 | 3.1 | 3.3 | 59.8 | 59.7 | 33.3 | 34.3 | 3.8 | 2.7 |
| Van Buren | 134 | 931 | 8.2 | 11.9 | 57.5 | 53.9 | 28.3 | 29.7 | 6.0 | 4.5 |
| County | 2146 | 16805 | 7.2 | 7.5 | 54.3 | 56.4 | 36.9 | 34.8 | 1.6 | 1.3 |

Sandusky County:

This county was the most evenly balanced of the 12 in the three outlets. Table 20 shows that in farms the percentages were 33.5, 35.3 and 28, and in cattle 42.2, 33.6, and 22.2. The tendency for the largest herds to be in the city milk outlet and the smallest in butterfat was marked in this case. The even distribution of farms around the three outlets carried down into the townships to a large degree. There were few townships that had as much as 50 percent in any one outlet.

There were no milk regulations by county or city health districts in effect in the county.

There were 28 producer-distributors licensed in 1935. Seven of these were reported as in business in 1940 and 22 additional farms were checked as producer-distributors in the 1940 survey.

Distributors and manufacturers were:

Milk Distributors

Billows Whole Milk, Fremont
Bowhes Dairy, Fremont
Ralph J. Gabel, Fremont
Fred W. Linder, Fremont
A. H. Schmitko, Fremont
Square Deal Dairy, Fremont
Midman Farm Dairy, Fremont
Riverside Dairy, Woodville

Manufacturing Plants

Crogan Creamery Co., Fremont, Misc.
Valley Dairy Co., Fremont, Misc.
Pet Milk Co., Fremont, Evap. Milk
Clotus C. Malhmus, Fremont, Butter

Table 20. Number of Dairy Farms and Milk Cattle and Per Cent of Each by Market Outlet, Sandusky County

| Township | Total Number of Farms | Total Number of Milk Cattle | For Fluid Consumption | | Fluid for Manufacture | | Butterfat | | Not Classified | |
|-------------|--------------------------------|--------------------------------------|--------------------------|----------------|--------------------------|----------------|--------------|----------------|-------------------|----------------|
| | | | Farm pet. | Cattle pet. | Farm pet. | Cattle pet. | Farm pet. | Cattle pet. | Farm pet. | Cattle pet. |
| Ballville | 173 | 1682 | 31.7 | 40.9 | 44.0 | 37.4 | 23.1 | 20.6 | 1.2 | 1.1 |
| Green Creek | 140 | 1139 | 32.2 | 43.9 | 31.4 | 32.6 | 32.2 | 21.1 | 4.2 | 2.4 |
| Jackson | 145 | 1403 | 37.3 | 46.7 | 24.8 | 27.9 | 37.2 | 25.1 | 0.7 | .3 |
| Madison | 130 | 1051 | 60.0 | 66.4 | 18.5 | 15.9 | 15.4 | 12.8 | 6.1 | 4.9 |
| Rico | 101 | 826 | 14.8 | 13.8 | 62.4 | 65.4 | 17.8 | 16.0 | 5.0 | 4.8 |
| Riley | 158 | 1323 | 16.4 | 27.6 | 48.8 | 41.9 | 33.5 | 29.2 | 1.3 | 1.3 |
| Sandusky | 101 | 1081 | 44.6 | 55.9 | 31.7 | 28.5 | 17.8 | 13.0 | 5.9 | 2.6 |
| Scott | 128 | 1116 | 28.2 | 39.0 | 11.7 | 8.8 | 55.4 | 48.8 | 4.7 | 3.4 |
| Townsend | 108 | 921 | 35.2 | 49.5 | 19.4 | 17.5 | 43.5 | 1.2 | 1.9 | 31.8 |
| Washington | 231 | 2321 | 37.2 | 41.0 | 40.7 | 42.1 | 15.6 | 14.1 | 6.5 | 2.8 |
| Woodville | 139 | 1425 | 52.5 | 60.6 | 12.9 | 10.8 | 34.6 | 28.6 | --- | --- |
| York | 155 | 1371 | 13.5 | 20.0 | 66.5 | 66.5 | 19.4 | 12.6 | .6 | .9 |
| County | 1709 | 15659 | 33.5 | 42.2 | 35.3 | 33.6 | 28.0 | 22.2 | 3.2 | 2.0 |

Seneca County:

The county had 2234 farms on which 3 or more dairy cattle were tested. It was the leading county in the 12 in the percentage of farms selling butterfat but Hancock County had a slightly larger percentage of the cattle in that outlet, as shown in Table 9. There was a great difference in the size of herds on the farms selling for fluid consumption and those selling butterfat as shown in Table 10. The distribution of outlets by townships is shown in Table 21. The demand for milk for city use came mainly from Tiffin and Fostoria and was well distributed over the county. There were 7 townships in which more than 50 per cent of the farms sold butterfat but only 2 in which more than 50 per cent of the cattle were so classified.

There were no milk regulations in effect on a county basis but the city of Tiffin was operating under the U. S. Public Health Ordinance.

Producer-distributors have an important place in milk distribution in Seneca County. There were 56 licensed in 1935 under the Burk Act. Of these 14 were reported as operating in 1940. Those reporting added 41 additional names. This brought the total for 1940 to the same level as in 1935.

The distributors and manufacturers listed were:

| | |
|---------------------------|--|
| Elias Fox & Son, Fostoria | The Geo. Freese's Sons Co., Fostoria, Butter |
| Goetz's Dairy, Tiffin | The Gray & White Company, Tiffin, Butter |
| C. L. Huffman, Tiffin | *Hubach Dairy Product Co., Tiffin, Misc. |
| Ideal Dairy, Tiffin | *Pure Milk & Dairy Co., Tiffin, Misc. |
| H. F. Knieriemen, Tiffin | Tiffin Creamery Co., Tiffin, Butter |
| Pioneer Dairy, Tiffin | Windsor Evaporated Milk Co., Utica, Evap. |
| | Milk |

*These firms were also listed as distributors.

Table 21. Number of Dairy Farms and Milk Cattle and Per Cent of Each by Market Outlet, Seneca County

| Township | Total Number of Farms | Total Number of Milk Cattle | For Fluid Consumption | | Fluid for Manufacture | | Butterfat | | Not Classified | |
|-------------|--------------------------------|--------------------------------------|--------------------------|------|--------------------------|------|-----------|------|-------------------|------|
| | | | pct. | pct. | pct. | pct. | pct. | pct. | pct. | pct. |
| Adams | 166 | 1460 | 17.5 | 26.8 | 45.8 | 43.0 | 36.7 | 30.2 | --- | --- |
| Big Springs | 134 | 1355 | 20.1 | 26.2 | 8.2 | 9.1 | 71.7 | 64.7 | --- | --- |
| Bloom | 150 | 1572 | 11.4 | 15.2 | 33.3 | 35.8 | 52.0 | 47.1 | 3.3 | 1.9 |
| Clinton | 148 | 1513 | 27.0 | 42.4 | 21.6 | 22.8 | 51.4 | 34.8 | --- | --- |
| Eden | 143 | 1640 | 23.1 | 36.8 | 23.1 | 21.8 | 51.7 | 40.4 | 2.1 | 1.0 |
| Hopewell | 163 | 2148 | 46.8 | 52.5 | 31.9 | 33.7 | 21.5 | 13.8 | --- | --- |
| Jackson | 131 | 1172 | 13.0 | 18.5 | 35.1 | 41.2 | 46.6 | 37.2 | 5.3 | 3.1 |
| Liberty | 128 | 1358 | 19.5 | 27.8 | 34.4 | 38.0 | 46.1 | 34.2 | --- | --- |
| Louden | 153 | 1438 | 11.1 | 16.7 | 43.8 | 41.5 | 42.5 | 39.2 | 2.6 | 2.6 |
| Pleasant | 134 | 1618 | 29.9 | 39.7 | 23.1 | 23.9 | 47.0 | 36.4 | --- | --- |
| Reed | 142 | 1197 | 0.7 | 2.0 | 43.0 | 49.0 | 56.3 | 49.0 | --- | --- |
| Scipio | 153 | 1388 | 19.0 | 30.2 | 21.6 | 20.5 | 52.4 | 49.3 | --- | --- |
| Seneca | 173 | 1872 | 28.3 | 41.0 | 8.1 | 7.4 | 61.3 | 50.2 | 2.3 | 1.4 |
| Thompson | 152 | 1425 | 17.1 | 23.3 | 43.4 | 41.7 | 35.5 | 32.0 | 4.0 | 3.0 |
| Venice | 164 | 1526 | 25.0 | 32.7 | 25.6 | 23.7 | 49.4 | 43.6 | --- | --- |
| County | 2234 | 22660 | 20.9 | 30.3 | 29.5 | 29.5 | 48.3 | 39.4 | 1.3 | 0.8 |

Williams County:

Table 22 shows that 58.6 per cent of the cattle were in the classification of milk for manufacture and 35.6 in butterfat. This county had a very small requirement in farms and cattle for fluid consumption. The difference in size of herds was not so pronounced here as in some of the other counties. There was a slight advantage in the manufacturing group over those going to butterfat outlots.

There were no regulations by boards of health on either a county or city basis.

In 1935 there were 30 producer-distributors licensed by the Milk Marketing Commission. Only 4 of them were reported as in business in 1940. Those checking the lists in 1940 added 10 additional names, making a total of 14 for the county.

The distributors and manufacturers were:

Milk Distributors

Benner Dairy, Bryan
Lyles D. Guise, Bryan
J. S. Mason, Bryan
Schumacker Dairy, Bryan
City Dairy, Montpelier
W. C. Lett, Montpelier
Sunshine Dairy, Montpelier

Manufacturing Plants

Fountain City Creamery, Bryan, Butter
Van Camp Packing Co., Bryan, Evap. Milk
Montpelier Creamery, Montpelier, Butter

Table 22. Number of Dairy Farms and Milk Cattle and Per Cent of Each by Market Outlet, Williams County

| Township | Total Number of Farms | Total Number of Milk Cattle | For Fluid Consumption | | Fluid for Manufacture | | Butterfat | | Not Classified | |
|-------------|--------------------------------|--------------------------------------|--------------------------|----------------|--------------------------|----------------|--------------|----------------|-------------------|----------------|
| | | | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. |
| Brady | 138 | 1362 | 3.6 | 4.8 | 63.7 | 67.2 | 32.7 | 28.0 | --- | --- |
| Bridgewater | 146 | 1473 | --- | --- | 43.2 | 43.8 | 56.8 | 56.2 | --- | --- |
| Centor | 181 | 1544 | 4.4 | 5.1 | 68.5 | 70.8 | 21.0 | 19.6 | 6.1 | 4.5 |
| Florence | 219 | 2288 | --- | --- | 44.7 | 46.6 | 54.8 | 52.9 | 0.5 | 0.5 |
| Jefferson | 171 | 1825 | 1.7 | 2.7 | 68.4 | 68.8 | 23.4 | 23.3 | 6.5 | 5.2 |
| Madison | 163 | 1290 | 2.4 | 2.7 | 67.6 | 73.8 | 28.8 | 22.9 | 1.2 | 0.6 |
| Mill Creek | 109 | 917 | --- | --- | 64.2 | 68.9 | 33.0 | 29.3 | 2.8 | 1.8 |
| Northwest | 141 | 1185 | --- | --- | 15.6 | 14.5 | 84.4 | 85.5 | --- | --- |
| Pulaski | 171 | 1916 | 4.6 | 11.0 | 76.7 | 77.7 | 18.7 | 11.3 | --- | --- |
| St. Joseph | 136 | 1318 | 4.3 | 5.4 | 64.0 | 66.3 | 28.7 | 25.6 | 3.0 | 2.7 |
| Springfield | 149 | 1139 | 1.3 | 1.5 | 61.7 | 58.7 | 37.0 | 39.8 | --- | --- |
| Superior | 170 | 1611 | 10.6 | 14.7 | 44.1 | 43.7 | 41.2 | 39.4 | 4.1 | 2.2 |
| County | 1894 | 17868 | 2.8 | 4.3 | 56.9 | 58.6 | 38.3 | 35.6 | 2.0 | 1.5 |

Wood County:

This county, as shown in Table 23, had more farms going into fluid consumption outlets than into any other outlet. Toledo draws heavily on Wood County. When compared with the other counties it had the largest percentage of farms of the 12 in the city market, but Lucas County had a slightly higher percentage of the cattle so classified. About twice as many farms were selling butterfat as milk for manufacture.

The county had for several years been operating under the U. S. Public Health Standard Ordinance.

Producer-distributors were an important factor in local milk distribution. There were 57 licensed in 1935 of which 12 were reported as in business in 1940. Those reporting added 39 new names as of 1940. The number of distributors whose places of business were in Wood County was small but several firms from outside delivered in Wood County. The local distributors were:

Model Dairy, Bowling Green
Sanitary Dairy, Bowling Green
Homewood Dairy, Perrysburg

Lewis Lasky, Perrysburg
Riverside Dairy, Woodville

Farms outside the county that made deliveries in Wood County were:

Baker & Brandeborg, Fostoria
Page Dairy, Toledo
Village Farm Dairy, Toledo

Clover Leaf Dairy, Toledo
Babcock Dairy, Toledo
Driggs Dairy, Toledo

White Mt. Creamery had a plant in Bowling Green classed as a manufacturing plant.

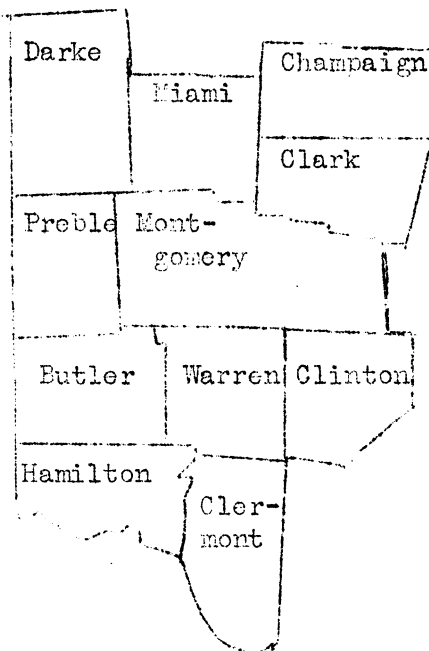
Table 23. Number of Dairy Farms and Milk Cattle and Per Cent of Each
by Market Outlet, Wood County

| Township | Total Number of Farms | Total Number of Milk Cattle | For Fluid Consumption | | Fluid for Manufacture | | Butterfat | | Not Classified | |
|--------------|--------------------------------|--------------------------------------|--------------------------|----------------|--------------------------|----------------|--------------|----------------|-------------------|----------------|
| | | | Farm pet. | Cattle pet. | Farm pet. | Cattle pet. | Farm pet. | Cattle pet. | Farm pet. | Cattle pet. |
| Bloom | 114 | 801 | 32.5 | 26.7 | 48.2 | 43.5 | 19.3 | 29.8 | --- | --- |
| Contor | 106 | 693 | 71.7 | 78.8 | 4.7 | 4.1 | 18.9 | 13.4 | 4.7 | 3.7 |
| Freedom | 157 | 1148 | 56.0 | 62.9 | 9.6 | 11.5 | 34.4 | 25.6 | --- | --- |
| Grand Rapids | 56 | 382 | 60.7 | 67.0 | 3.6 | 2.6 | 32.1 | 25.9 | 3.6 | 4.5 |
| Henry | 104 | 797 | 19.2 | 23.8 | 37.5 | 32.5 | 41.4 | 42.6 | 1.9 | 1.1 |
| Jackson | 105 | 590 | 3.8 | 3.2 | 34.3 | 41.5 | 61.9 | 55.3 | --- | --- |
| Lake | 97 | 824 | 79.5 | 85.0 | 4.1 | 4.4 | 15.5 | 10.0 | 0.9 | 0.6 |
| Liberty | 132 | 954 | 43.1 | 53.3 | 9.8 | 7.7 | 41.1 | 35.4 | 6.0 | 3.6 |
| Middletown | 92 | 619 | 40.2 | 44.4 | 28.3 | 24.1 | 31.5 | 31.5 | --- | --- |
| Milton | 119 | 725 | 19.3 | 29.3 | 32.8 | 32.1 | 43.7 | 35.5 | 4.2 | 3.1 |
| Montgomery | 158 | 1085 | 12.0 | 15.0 | 24.1 | 31.1 | 60.7 | 50.5 | 3.2 | 3.4 |
| Perry | 143 | 1195 | 51.0 | 55.5 | 9.8 | 8.1 | 37.8 | 35.3 | 1.4 | 1.1 |
| Perrysburg | 155 | 1026 | 84.5 | 89.8 | 5.2 | 5.0 | 3.9 | 1.9 | 6.4 | 3.3 |
| Plain | 117 | 848 | 56.5 | 70.6 | 6.8 | 3.9 | 31.6 | 23.0 | 5.1 | 2.5 |
| Portago | 118 | 834 | 54.2 | 62.2 | 11.0 | 11.0 | 34.8 | 26.8 | --- | --- |
| Ross | 28 | 246 | 57.1 | 76.8 | --- | --- | 7.2 | 4.9 | 35.7 | 18.3 |
| Troy | 133 | 976 | 60.9 | 69.9 | 6.8 | 5.4 | 30.8 | 24.0 | 1.5 | 0.7 |
| Washington | 50 | 386 | 36.0 | 42.0 | 8.0 | 4.9 | 56.0 | 53.1 | --- | --- |
| Wobstor | 136 | 868 | 33.1 | 36.6 | 16.9 | 17.8 | 50.0 | 45.6 | --- | --- |
| Weston | 65 | 533 | 9.3 | 24.4 | 38.4 | 36.4 | 52.3 | 39.2 | --- | --- |
| County | 2185 | 15530 | 44.4 | 51.4 | 17.2 | 16.5 | 35.7 | 30.4 | 2.7 | 1.7 |

FARM SALES OF OHIO MILK THROUGH DIFFERENT OUTLETS

IV. Dayton-Cincinnati Area: Butler, Champaign, Clark, Clermont,
Clinton, Darke, Greene, Hamilton, Miami, Montgomery,
Preble and Warren Counties

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Farm Sales of Ohio Milk Through Different Outlets

Part IV

IV. Dayton-Cincinnati Area; Butler, Champaign, Clark, Clermont,
Clinton, Darke, Greene, Hamilton, Miami, Montgomery,
Preble and Warren Counties

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FARM SALES OF MILK THROUGH DIFFERENT OUTLETS

IV. Dayton-Cincinnati Area: Butler, Champaign, Clark, Clermont, Clinton, Darke, Greene, Hamilton, Miami, Montgomery, Preble and Warren Counties/1

by

C. G. McBride and R. W. Sherman

Sources of Data

This study, the fourth of a series, is based upon a survey of all farms with three or more dairy cattle at the time of the last test for tuberculosis conducted by the U.S. Bureau of Animal Industry and the Ohio Department of Agriculture. The records were obtained through the cooperation of these authorities and agricultural extension agents in charge of the records in the counties.

A list of herd owners was arranged by townships. Several copies of each list were made and these were mailed to a carefully selected group of key men, well distributed in each township. Each recipient of a list was asked to check the disposition of milk from each farm on which he had this information. When a producer was selling both to a city milk dealer and to a manufacturing outlet, he was recorded in the city milk dealer outlet.

When the checked sheets were returned the reports for each township were combined and in most cases it was found that a practically complete record had been obtained. In a few townships, the returns were not full enough to constitute a satisfactory record. Personal visits were made into these townships in order to complete the data. A very high percentage of those who received lists cooperated by returning them promptly. Without this generous response on the part of those who were asked to assist, this survey would not have been possible. The cost in time and money of personal visitation to every township would have been prohibitive.

Limitations of the Study

Some difficulties were encountered in obtaining the information from the testing records. Some herds designated as mixed breeds undoubtedly were in whole or part beef cattle, but there was no way to determine the exact numbers. In areas surrounding the cities, there were many farms with 3 or 4 cattle tested. Replies indicated that many of these were kept primarily for home use but in some cases a small amount of milk or butterfat might be sold at certain times. Those who reported often lacked accurate information as to disposal of dairy products on such farms.

/1 Area I comprised Delaware, Fairfield, Franklin, Licking, Madison, Pickaway and Union Counties. Area II, Carroll, Columbiana, Holmes, Medina, Portage, Stark, Summit, Tuscarawas and Wayne Counties. Area III, Defiance, Fulton, Hancock, Henry, Lucas, Ottawa, Paulding, Putnam, Sandusky, Seneca, Williams and Wood Counties.

Some farmers had moved out of the townships between the test and the survey, but this factor was in large measure adjusted by the addition of new names by those reporting. In a very few cases, where all attempts to obtain a complete record left too large a percentage of farms unclassified, some adjustments were made, based on the records of adjacent townships with approximately the same conditions. Despite the limitations described above, it is believed that the study presents a dependable picture of the disposal of milk from the farms of the area.

Type of Farming

This twelve county district is one of heavy crop production as well as of livestock. It includes some of the most important hog production area of the state. Dairy ranks second to hogs as a source of total cash farm income in this area. The average per county income per year for the 12 counties of this area for 1934-1938 was about \$1,090,000. Darke County was highest with approximately \$1,500,000 and Clinton County was lowest with about \$620,000.

The following table shows the first four most important sources of cash farm income for each County. Dairying ranked first in 6 counties and second in the other six counties. Hogs ranked first in the six counties in which dairying ranked second and second in four other counties. One fourth of all cash farm income of this area comes from dairying.

Table 1. Important Sources and Percentage of Total Cash Farm Income Contributed by, and Rank of Each
12 Southwestern Ohio Counties, 1934 - 1938 Average

| County | Total Cash Farm Income | Rank of sources of income and their relative importance | Pct. of | | | | Pct. of | | | |
|------------|---------------------------|--|------------------|-----------|------------------|---------|------------------|---------|------------------|--------|
| | | | Pct. of Total | First | Pct. of Total | Second | Pct. of Total | Third | Pct. of Total | Fourth |
| Butler | \$ 3,923,000 | DAIRY | 33 | Hogs | 27 | Wheat | 11 | Poultry | 8 | |
| Champaign | 4,352,000 | Hogs | 29 | DAIRY | 27 | Wheat | 10 | Poultry | 7 | |
| Clark | 4,359,000 | DAIRY | 27 | Hogs | 26 | Wheat | 11 | Cattle | 7 | |
| Clermont | 2,504,000 | DAIRY | 37 | Poultry | 17 | Hogs | 14 | Tobacco | 12 | |
| Clinton | 4,434,000 | Hogs | 48 | DAIRY | 14 | Wheat | 10 | Poultry | 7 | |
| Darke | 7,212,000 | Hogs | 27 | DAIRY | 21 | Poultry | 13 | Wheat | 9 | |
| Greene | 4,520,000 | Hogs | 38 | DAIRY | 20 | Wheat | 11 | Poultry | 6 | |
| Hamilton | 3,691,000 | DAIRY | 29 | Gr. House | 19 | Truck | 15 | Nursery | 14 | |
| Miami | 4,592,000 | DAIRY | 25 | Hogs | 18 | Wheat | 12 | Cattle | 11 | |
| Montgomery | 4,787,000 | DAIRY | 27 | Hogs | 18 | Poultry | 11 | Tobacco | 9 | |
| Preble | 4,725,000 | Hogs | 40 | DAIRY | 20 | Wheat | 11 | Poultry | 7 | |
| Warren | 3,530,000 | Hogs | 33 | DAIRY | 29 | Poultry | 8 | Wheat | 8 | |
| Total | 52,629,000 | Hogs | 27 | DAIRY | 25 | Wheat | 9 | Poultry | 9 | |

Transportation Facilities

Movement of milk and cream into different market outlets is influenced to a great extent by the type of highway available. The only means of transportation used in marketing milk and cream in this area in 1941 was the motor truck.

The public road mileage as of January 1, 1941 classified into hard surface, gravel and earth, is given in Table 2. Compared with the other areas studied, this area has the smallest percentage of earth road mileage, 322 miles or 3 per cent in the total of 10,768 miles. The Akron-Canton area had 24 per cent of earth roads. The percentage of gravel roads is relatively high in this area. This, however, has little influence upon the movement of milk to market since gravel as well as hard surface roads are usable for milk trucks every day in the year.

Table 2. Public Road Mileage of the Area by Types and by Counties
as of January 1, 1941

| County | Hard Surface | | Gravel | | Earth | | Total Miles |
|------------|--------------|------|--------|------|-------|------|----------------|
| | Miles | Pct. | Miles | Pct. | Miles | Pct. | |
| Butler | 352.5 | 38.6 | 529.1 | 58.0 | 31.0 | 3.4 | 912.6 |
| Champaign | 286.3 | 35.7 | 504.2 | 62.9 | 11.1 | 1.4 | 801.6 |
| Clark | 85.1 | 11.3 | 665.9 | 88.7 | 0.0 | 0.0 | 750.9 |
| Clermont | 246.2 | 24.4 | 576.3 | 57.2 | 184.9 | 18.4 | 1007.3 |
| Clinton | 138.5 | 18.5 | 588.3 | 78.8 | 20.2 | 2.7 | 747.0 |
| Darke | 88.4 | 6.9 | 1175.7 | 91.6 | 19.2 | 1.5 | 1283.3 |
| Greene | 265.6 | 34.8 | 489.7 | 64.2 | 7.7 | 1.0 | 763.0 |
| Hamilton | 818.8 | 93.0 | 54.2 | 6.2 | 7.2 | 0.8 | 880.2 |
| Miami | 89.4 | 10.4 | 770.3 | 89.4 | 1.7 | 0.2 | 861.4 |
| Montgomery | 178.4 | 15.7 | 959.8 | 84.3 | 0.0 | 0.0 | 1138.2 |
| Preble | 64.0 | 7.4 | 782.8 | 91.3 | 11.0 | 1.3 | 857.8 |
| Warren | 71.1 | 9.3 | 665.3 | 87.0 | 28.0 | 3.7 | 764.7 |
| Total | 2684.3 | 24.9 | 7761.6 | 72.1 | 322.0 | 3.0 | 10768.0 |

Comparison of Study Data with Census and Crop and Livestock Reports

The United States Census and the Federal-State Cooperative Crop and Livestock Reporting Service have a listing of milk cattle as "cows and heifers, 2 years old and over". This classification can be used to compare with the data collected for this study as shown in Table 3.

The test records from which this study was made listed all cattle tested for tuberculosis. Records were available in this 12 county area on several hundred milk producers as to the number of milk cows in their herds. These and the tuberculosis test records were for approximately the same period and from these two sources a valid comparison was possible.

Table 3. Number of Cows and Heifers, 2 Years Old and Over, Number of Milk Cows, Number of Cows Milked per Farm and Number of Cattle and Milk Cows per Farm in the Study, by Counties

| County | Milk cows and heifers 2 yrs. old & over | | Cows** per farm 1940 Census | All cattle per farm in study | Cows only* per farm in study |
|-------------|--|------------------------|-----------------------------------|------------------------------------|------------------------------------|
| | Crop & Livestock estimates, 1940 | Milk cows in study* | | | |
| Butler | 14,700 | 12,196 | 6.0 | 11.2 | 8.3 |
| Champaign | 16,100 | 14,460 | 8.1 | 12.6 | 9.3 |
| Clark | 13,400 | 12,478 | 7.0 | 13.3 | 9.8 |
| Clermont | 12,600 | 12,401 | 4.4 | 8.8 | 6.5 |
| Clinton | 8,500 | 9,116 | 4.5 | 9.1 | 6.7 |
| Darke | 23,800 | 20,053 | 5.1 | 8.3 | 6.2 |
| Greene | 11,300 | 12,328 | 5.6 | 10.2 | 7.5 |
| Hamilton | 9,100 | 7,902 | 4.8 | 10.2 | 7.5 |
| Miami | 14,800 | 16,078 | 5.6 | 10.7 | 7.9 |
| Montgomery | 14,500 | 12,589 | 4.8 | 9.1 | 6.8 |
| Preble | 12,500 | 12,692 | 5.2 | 9.3 | 6.9 |
| Warren | 12,400 | 11,445 | 5.8 | 10.5 | 7.8 |
| 12 Counties | 163,700 | 153,738 | 5.5 | 10.0 | 7.4 |
| State | 1,043,000 | xxxx | 5.3 | xxxx | xxx |

* Conversion factor of 74.0 as explained above

** Cows and heifers 2 years old and over kept mainly for milk production, 1939

In these two sets of records several hundred identical farms were compared. It was found that for each 100 cattle tested there were 74.0 milk cows. This ratio has been used as a conversion factor to convert "all cattle" of the test records to an estimated number of "milk cows". These computed figures are compared with the crop and livestock estimates in Table 3.

The number of milk cows computed from this study agrees with the Crop and Livestock Service estimates with the exception of three or four Counties. In those counties where beef type cows are milked part of the year, the study figures are higher than those of the Crop and Livestock Service's. In counties where there are many one and two cow herds, the figures are lower than those of the Crop and Livestock Service.

In Table 3 a comparison also is made of cows per farm as recorded in the 1940 Census with the computed figures of the study. In the Census figures the total number of cows milked any time during 1939 were divided by the number of farms reporting cows and heifers 2 years old and over kept mainly for milk production. The average per farm of milk cows for the study was computed by applying the conversion factor mentioned above to all cattle tested. It is obvious that the average of the study would be higher than for the Census, because the farms with 1 or 2 milk cows are included in the Census but not in the survey.

Table 4. Sales of Whole Milk and Butterfat and Number of Farms Reporting Each, by County, 1939

| County | Farms report- ing whole milk sold (number) | Annual sales of whole milk per farm reporting (gallons) | Farms report- ing cream sold as butterfat (number) | Annual sales of butterfat per farm (pounds) |
|-------------|---|--|---|--|
| Butler | 1,117 | 4,716.8 | 532 | 577.3 |
| Champaign | 1,097 | 4,979.9 | 578 | 783.9 |
| Clark | 749 | 5,713.6 | 782 | 680.9 |
| Clermont | 804 | 3,689.4 | 1146 | 440.6 |
| Clinton | 798 | 2,640.2 | 580 | 449.3 |
| Darke | 2,845 | 2,549.6 | 1216 | 660.3 |
| Greene | 927 | 3,450.2 | 601 | 451.4 |
| Hamilton | 687 | 4,799.9 | 242 | 424.8 |
| Miami | 1,405 | 3,316.2 | 789 | 727.5 |
| Montgomery | 1,453 | 3,095.0 | 642 | 553.2 |
| Preble | 917 | 3,201.7 | 1019 | 620.1 |
| Warren | 1,146 | 4,144.8 | 386 | 484.8 |
| 12 Counties | 13,945 | 3,767.6 | 8513 | 585.4 |

Source: 1940 Census of Agriculture, First Series, Ohio

In Table 4 is listed the number of farms selling whole milk and butterfat for 1939, according to the 1940 Census. The principal butterfat selling counties of this area are Clark, Clermont, Darke, Miami and Preble. These five counties account for slightly less than 60% of all farms of this area selling butterfat. Since 1930 there has been an increase of 2095 farms selling whole milk and a decrease of 3592 farms selling butterfat.

These census figures reveal a surprising variation among counties in sales of whole milk and butterfat per farm. The sales of whole milk per farm in Clark County were well over double that for Darke County. Champaign County was highest in sales of butterfat per farm while Hamilton was the lowest.

The population of Butler, Clark, Hamilton and Montgomery Counties account for practically all of the half million increase for the 12 county area, from 1900 to 1940. While the population was increasing by 54%, the number of dairy cows increased by 29% with a resultant drop in the ratio of dairy cows to 100 population from 13.0 in 1900 to 10.6 in 1940. For the area as a whole, there were about twice as many cows as necessary to supply milk for fluid consumption if all production was available for such use.

Table 5. Number of Dairy Cows Compared with Total Population
in Counties of the Area, 1900 and 1940

| County | 1940 | | | 1900 | | |
|------------|----------------|---------------------|----------------------------|----------------|---------------------|----------------------------|
| | Dairy Cows* | Total Population | Cows per 100 population | Dairy Cows* | Total Population | Cows per 100 population |
| Butler | 13,590 | 120,249 | 11.3 | 9,165 | 56,870 | 16.1 |
| Champaign | 14,812 | 25,258 | 58.6 | 7,774 | 26,642 | 29.2 |
| Clark | 12,323 | 95,647 | 12.9 | 7,787 | 58,939 | 13.2 |
| Clermont | 11,714 | 34,109 | 34.3 | 8,711 | 31,610 | 27.6 |
| Clinton | 7,863 | 22,574 | 34.8 | 6,959 | 24,202 | 28.8 |
| Darke | 21,635 | 38,831 | 55.7 | 12,612 | 42,532 | 29.7 |
| Greene | 10,546 | 35,863 | 29.4 | 8,182 | 31,613 | 25.9 |
| Hamilton | 8,477 | 621,987 | 1.4 | 18,097 | 409,479 | 4.4 |
| Miami | 13,537 | 52,632 | 25.8 | 8,142 | 43,105 | 18.9 |
| Montgomery | 13,442 | 295,480 | 4.5 | 13,364 | 130,146 | 10.3 |
| Preble | 11,612 | 23,329 | 49.8 | 8,125 | 23,713 | 34.3 |
| Warren | 11,657 | 29,894 | 39.0 | 8,615 | 25,584 | 33.7 |
| Total | 151,208 | 1,395,853 | 10.8 | 117,533 | 904,435 | 13.0 |

Sources: U.S. Census of Population and of Agriculture, 1900 and 1940

* Cows and heifers 2 years old and over kept mainly for milk production, 1939

Changes in Market Outlets, 1903 to 1940

One of the first records of a systematic survey of outlets for milk and butterfat from Ohio farms is found in the annual report of the Ohio Dairymen's Association for 1903.^{/1} Professor J. W. Decker of Ohio State University compiled this directory of butter and cheese factories and milk skimming and shipping stations. The totals for the state were: butter factories, 148; skimming stations, 77; milk shipping stations, 22; American cheese factories, 114; Swiss cheese factories, 92. The report did not include milk dealers who purchased from farmers nor producer-distributors who sold milk at retail.

The 12 counties of this area had, in 1903, only 17 creameries or butter factories; 14 skimming stations and 2 milk shipping stations. In the Decker Survey the plants were classified as to type of ownership into private, stock company and cooperative. In Table 6 the plants in the area in 1903 are listed by county and type of ownership. There is a sharp contrast between this area and that of the Akron-Canton Area.^{/2} In the 9 counties of that area there were in 1903 a total of 128 dairy plants. In that area there was a pronounced concentration in cheese manufacturing. In this area there was none of either butter or cheese.

A survey of sources of market milk and butterfat in Ohio was made in 1931 by McBride and Cowden.^{/3} This survey gave the locations of manufacturing plants. At that time there was only one plant that was listed as strictly

^{/1} Reprint Annual Report Ohio Dairymen's Association, 1903, J.W. Decker

^{/2} Dept. Rural Economics, Mimeograph Bulletin No. 131, Part II

^{/3} Ohio Agricultural Experiment Station Bulletin #523, Sources of Market Milk and Butterfat in Ohio, C. G. McBride and T. K. Cowden, 1933

Table 6. Dairy Plants in Area in 1903
(excluding those engaged only in Milk Distribution)

| County | Creameries | | | Skimming Stations | | | American cheese Factories | | | Total |
|------------|------------|---|---|----------------------|---|---|---------------------------------|---|---|-------|
| | P | S | C | P | S | C | P | S | C | |
| Butler | - | - | - | - | - | - | 1 | - | - | 1 |
| Champaign | 4 | - | 1 | 1 | - | - | - | - | - | 6 |
| Clark | 2 | - | - | 1 | - | - | - | - | - | 3 |
| Clermont | - | - | - | - | - | - | 1 | - | - | 1 |
| Clinton | - | - | 3 | 4 | - | - | - | - | - | 7 |
| Darke | 1 | - | - | - | - | - | - | - | - | 1 |
| Greene | 1 | - | - | - | - | - | - | - | - | 1 |
| Hamilton | - | - | - | - | - | - | - | - | - | 0 |
| Miami | 1 | - | - | - | - | - | - | - | - | 1 |
| Montgomery | - | - | 1 | - | - | 1 | - | - | - | 2 |
| Preble | 1 | - | 1 | - | - | 2 | - | - | - | 4 |
| Warren | 1 | - | - | 8 | - | - | - | - | - | 9 |
| Total | 11 | - | 6 | 14 | - | 3 | 2 | - | - | 36 |

Key: P = Private
S = Stock
C = Cooperative

a milk manufacturing plant. It was in Darke County.

In butter manufacturing there was more activity in 1931. The following churning points were listed: Batavia, Cincinnati, Covington, Dayton, Greenville, and Springfield.

This area in 1931 was well established as the Ohio part of the Cincinnati milk shed. Farms were under Cincinnati inspection in Butler, Clermont, Clinton, Greene, Hamilton, Montgomery and Preble Counties. The total for the seven counties was 2619 farms, comprising slightly over one-third of the city milk supply.

In Table 7 is given a classification of dairy plants engaged in manufacturing milk and cream in 1941. This does not include milk distributing concerns that manufacture some ice cream and butter from the surplus over their distributing requirements. The status of milk outlets has not changed greatly between 1931 and 1941 with one exception. There has been a marked increase in the amount of milk going into evaporating plants in the northern part of the area. This trend was especially prominent in Darke, Preble, Miami and Champaign Counties.

Table 7. Dairy Plants in Area in 1941
(excluding those engaged only in Milk Distribution)

| County | Butter Manufacturing | Milk con- densing or evaporating | Combination including ice cream | Total |
|------------|-------------------------|--|---------------------------------------|-------|
| Butler | 1 | 2 | 5 | 8 |
| Champaign | 1 | - | 5 | 6 |
| Clark | 1 | - | 3 | 4 |
| Clermont | 1 | - | - | 1 |
| Clinton | - | - | - | - |
| Darke | 1 | 2 | 1 | 4 |
| Greene | - | 1 | 1 | 2 |
| Hamilton | 3 | - | 12 | 15 |
| Miami | 3 | 1 | 5 | 9 |
| Montgomery | 2 | - | 2 | 4 |
| Preble | - | - | - | - |
| Warren | - | - | - | - |
| Total | 13 | 6 | 34 | 53 |

Status of Sanitary Controls by Health Boards

This area presents a wide variety of sanitary regulations. The city of Cincinnati has a very strict sanitary code including a provision that all milk sold in the city must be pasteurized. Dayton has also had in force close supervision of its milk supply for several years.

The U. S. Public Health Service standard ordinance has not been generally adopted in this area. It has been adopted in three counties and some of the larger cities are giving its adoption serious consideration. The exact status county by county, is given in the county section of this bulletin.

Cooperative Marketing by Producers

This area includes some of the oldest and most successful dairy marketing cooperatives in Ohio. As early as 1906 about 600 dairy farmers around Cincinnati formed the Tri-State Milk Association. In 1915 the Queen City Milk Association was organized as a mutual bargaining association. In 1921 this association reorganized as the Tri-State Cooperative Association, but in order to avoid confusion with another dairy concern, the name was changed to Cooperative Pure Milk Association. This cooperative began distribution from a plant in Covington, Kentucky, January 1, 1923 and in November, 1923 purchased the French Bros. Bauer Company, a distributing and manufacturing concern in Cincinnati, and has since operated as a distributing cooperative.

Within the next year the Kentucky, Indiana and Ohio producers selling to members of the Cincinnati Milk Exchange organized the K.I.O Milk Producers As-

sociation. This was a bargaining association and was still operating as such when the survey was made in 1941.

About ten years later when the disturbing effect of low prices and excessive supplies struck the market, a second bargaining association, The Milk Producers Union was organized and has been functioning since.

In 1941 the market was operating under a federal order. To facilitate the handling of producer records, the two bargaining associations created the Cincinnati Sales Association.

The Miami Valley Cooperative Milk Producers Association, operating in the northern and eastern part of this area was organized in 1922. A surplus manufacturing plant was put into operation in April, 1923. The association at the time of the survey was selling milk on a bargaining basis in Dayton and Springfield, and operating distributing plants in Greenville and Troy in addition to greatly expanded butter manufacture in the original Dayton plant.

Two smaller bargaining associations were also operating in the area in 1941. The Miami County Milk Producers Association serves the Troy dealers other than the cooperative. The Middletown Milk Association acts as a bargaining agent for the city of Middletown.

Summary of Study by Counties and Townships

The material included in this section is a compilation of the information furnished by those who assisted in the mail survey supplemented by some additional data obtained in personal visits to the counties. Tables 8 to 10 and Figures 1 to 4 summarize the material for the district by counties. A discussion of each county with township analyses follows.

Table 8 summarizes the distribution of farms and cattle among the market outlets and Table 9 shows the percentage distribution of these farms and cattle by market outlet. In Table 10 is given the number of cows per farm by market outlet.

Milk sold by producer-distributors belongs in the same outlet classification as milk sold to dealers for fresh fluid consumption. In the county tables they are combined. To find the number of farms and cattle involved in supplying consumers with fresh milk it is necessary in all instances to combine the "Producer-Distributor" figures with those of "Fluid to Distributor". The total number of farms in this classification is 7326 or 35.4 per cent. These 7326 farms, however, have 45.7 per cent of the milk cattle because the larger dairy farms seek the city market outlets. The farms selling butterfat rank lowest in average number of cows per farm.

Among the counties the variation in per cent of dairy farms selling milk for fluid consumption is from 7.0 per cent for Darke County to 68.6 per cent for Butler County. In the case of number of milk cows on farms selling milk for fluid consumption, Darke County was low with 9.5 per cent and Butler was high with 77.8 per cent.

The figures 1 to 4 show the concentration of cows in the district. Figure 1 includes all milk cows in herds with 3 or more dairy cattle. Figure 2 shows the influence of the Dayton and Cincinnati fluid milk markets. Figure 3 shows the concentration of manufacturing milk in the north edge of the district while figure 4 shows the wide distribution of the sale of butterfat.

Table 8. Number of Dairy Farms and Number of Milk Cattle, by Market Outlet
12 Southwestern Ohio Counties, 1941

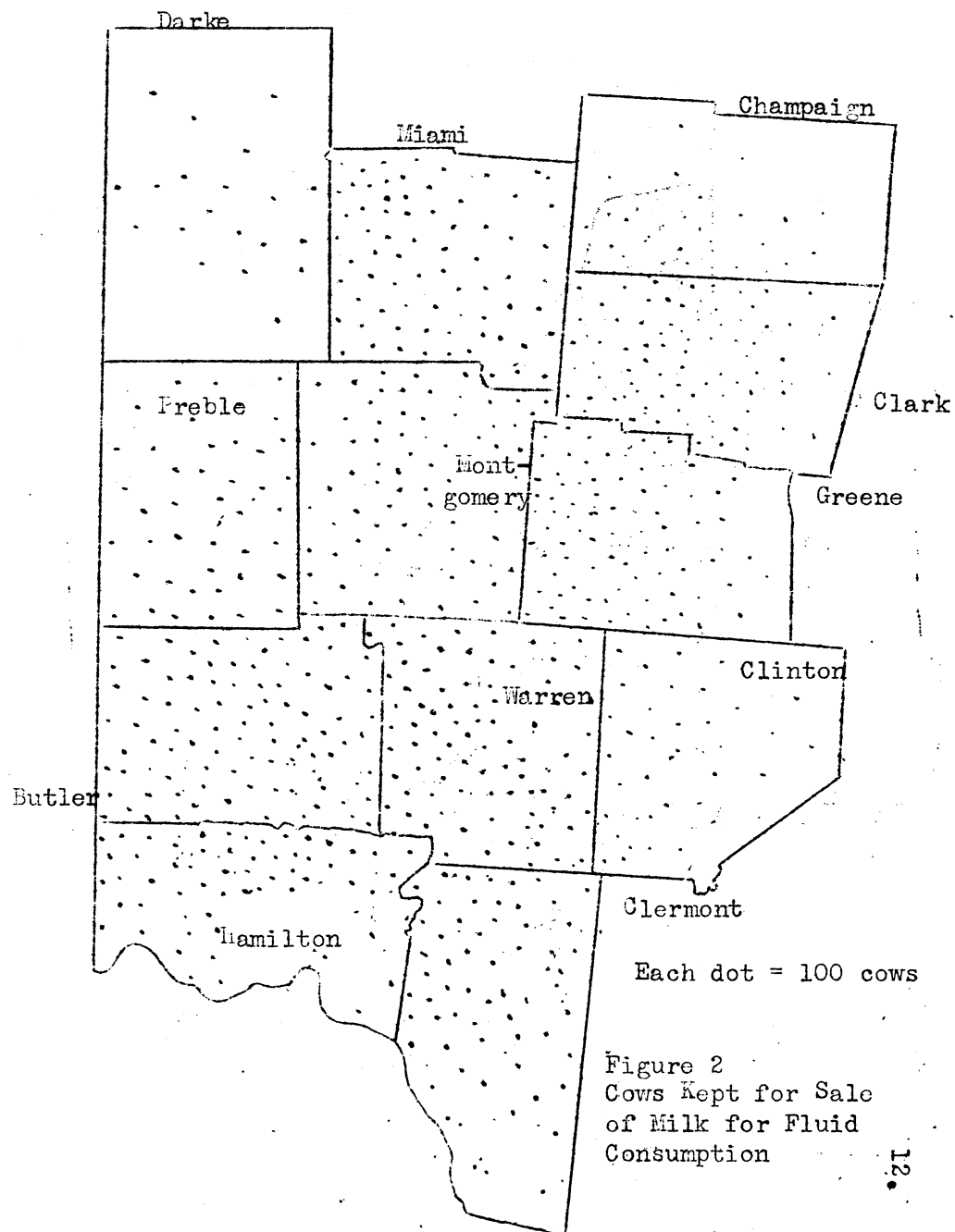
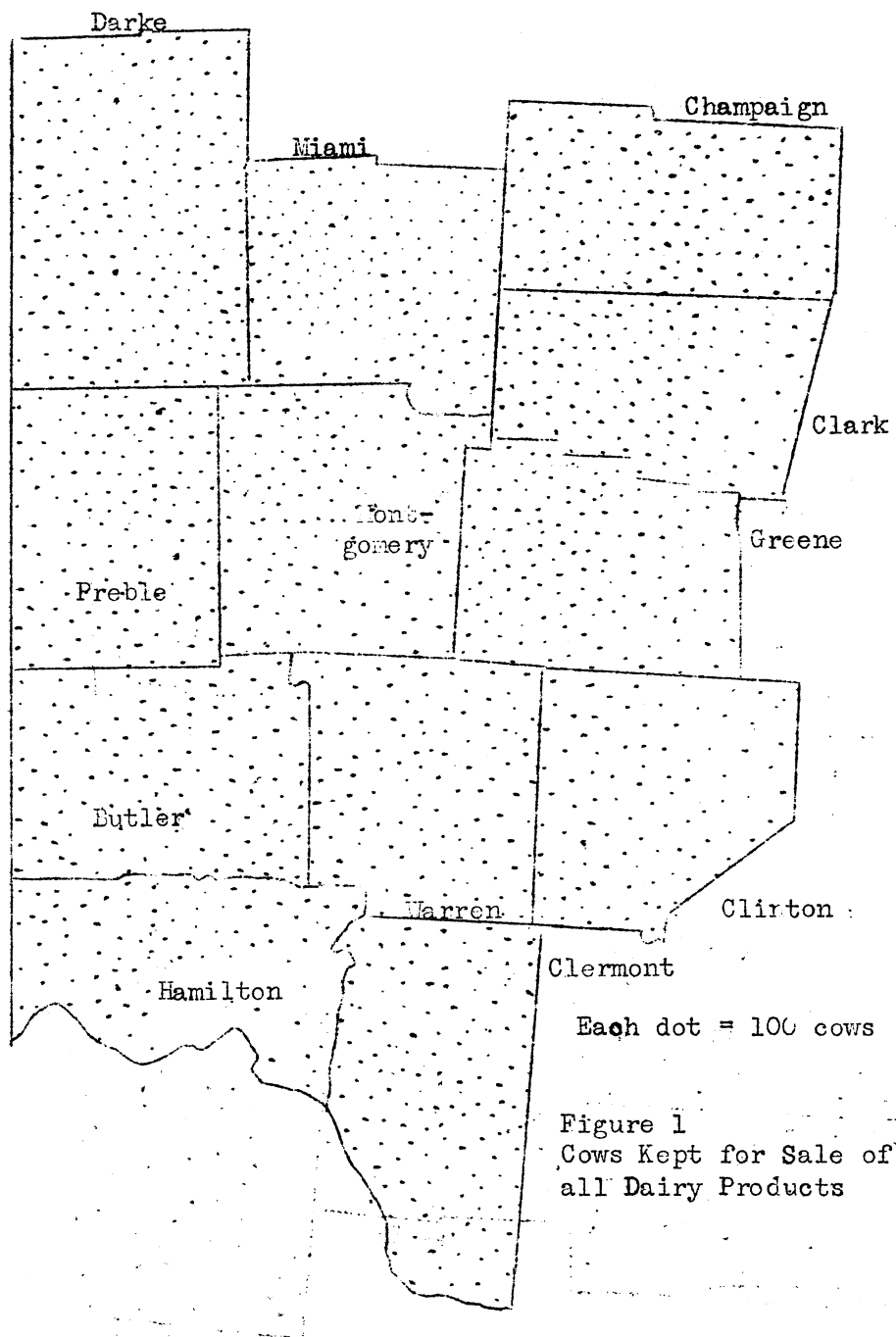
| County | Producer Distributor | | Fluid to Distributor | | Fluid for Manufacture | | Butterfat | | Not Classified | | Total | |
|------------|----------------------|--------|----------------------|--------|-----------------------|--------|-----------|--------|----------------|--------|--------|---------|
| | Farms | Cattle | Farms | Cattle | Farms | Cattle | Farms | Cattle | Farms | Cattle | Farms | Cattle |
| Butler | 48 | 767 | 957 | 12,056 | 25 | 428 | 390 | 2,936 | 46 | 294 | 1,466 | 16,481 |
| Champaign | 19 | 359 | 132 | 2,307 | 983 | 13,074 | 349 | 3,255 | 67 | 546 | 1,550 | 19,541 |
| Clark | 28 | 472 | 508 | 9,189 | 209 | 2,715 | 452 | 4,054 | 72 | 431 | 1,269 | 16,862 |
| Clermont | 68 | 984 | 555 | 6,694 | 124 | 1,091 | 1,075 | 7,507 | 86 | 482 | 1,908 | 16,758 |
| Clinton | 17 | 198 | 301 | 3,971 | 529 | 4,571 | 407 | 2,949 | 106 | 630 | 1,360 | 12,319 |
| Darke | 22 | 329 | 205 | 2,237 | 2,360 | 19,709 | 570 | 4,212 | 101 | 611 | 3,258 | 27,098 |
| Greene | 39 | 483 | 887 | 10,809 | 182 | 1,450 | 471 | 3,578 | 60 | 339 | 1,639 | 16,659 |
| Hamilton | 134 | 1,601 | 487 | 6,366 | 7 | 51 | 367 | 2,414 | 54 | 247 | 1,049 | 10,679 |
| Miami | 21 | 341 | 695 | 9,124 | 716 | 7,325 | 503 | 4,367 | 103 | 570 | 2,038 | 21,727 |
| Montgomery | 65 | 1,149 | 765 | 8,120 | 368 | 3,079 | 574 | 4,201 | 88 | 463 | 1,860 | 17,012 |
| Preble | 29 | 342 | 426 | 5,410 | 646 | 5,764 | 683 | 5,251 | 69 | 384 | 1,853 | 17,151 |
| Warren | 40 | 533 | 878 | 11,040 | 122 | 1,068 | 336 | 2,327 | 91 | 498 | 1,467 | 15,466 |
| Total | 530 | 7,560 | 6,796 | 87,323 | 6,271 | 60,325 | 6,177 | 47,051 | 943 | 5,495 | 20,717 | 207,753 |

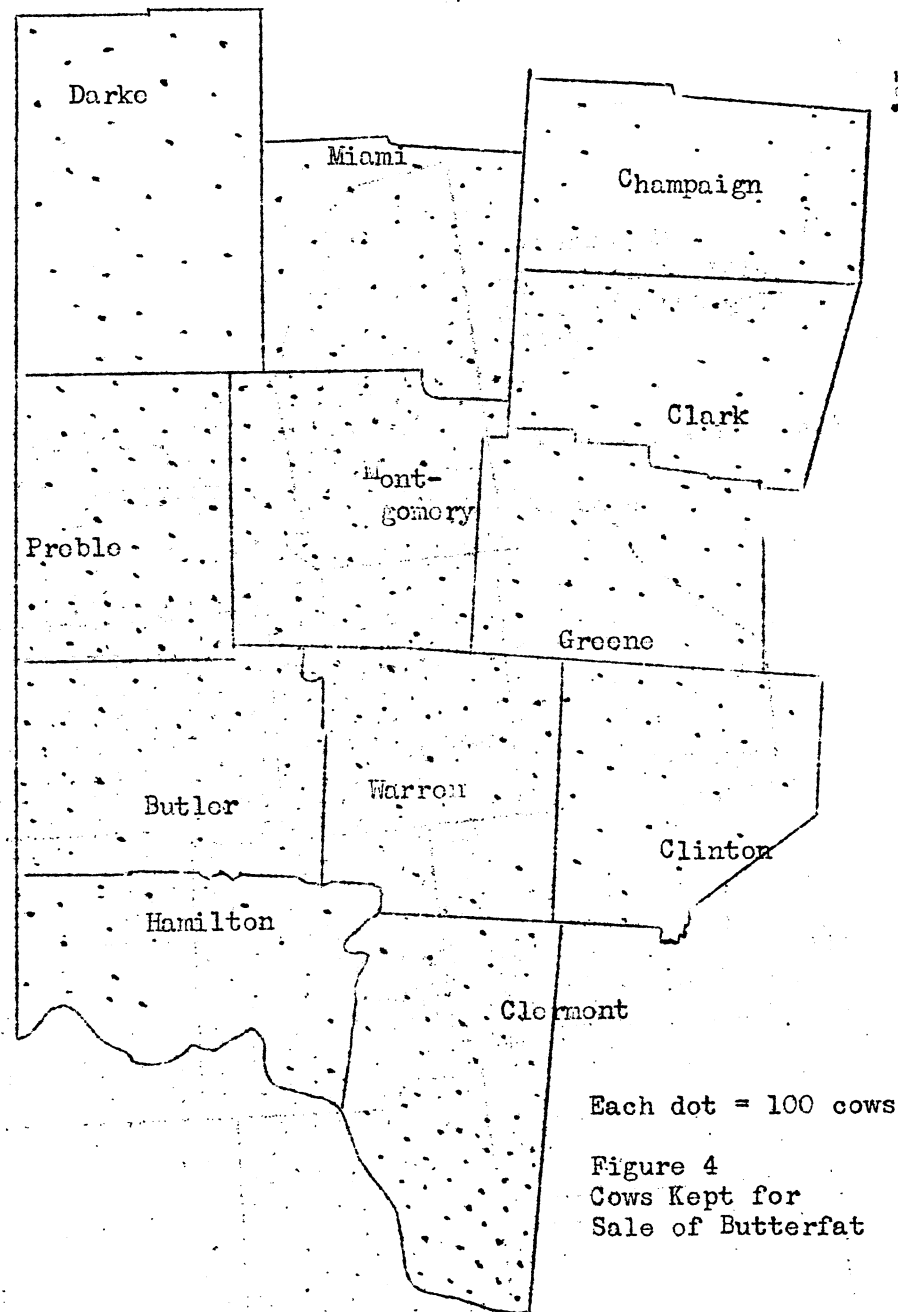
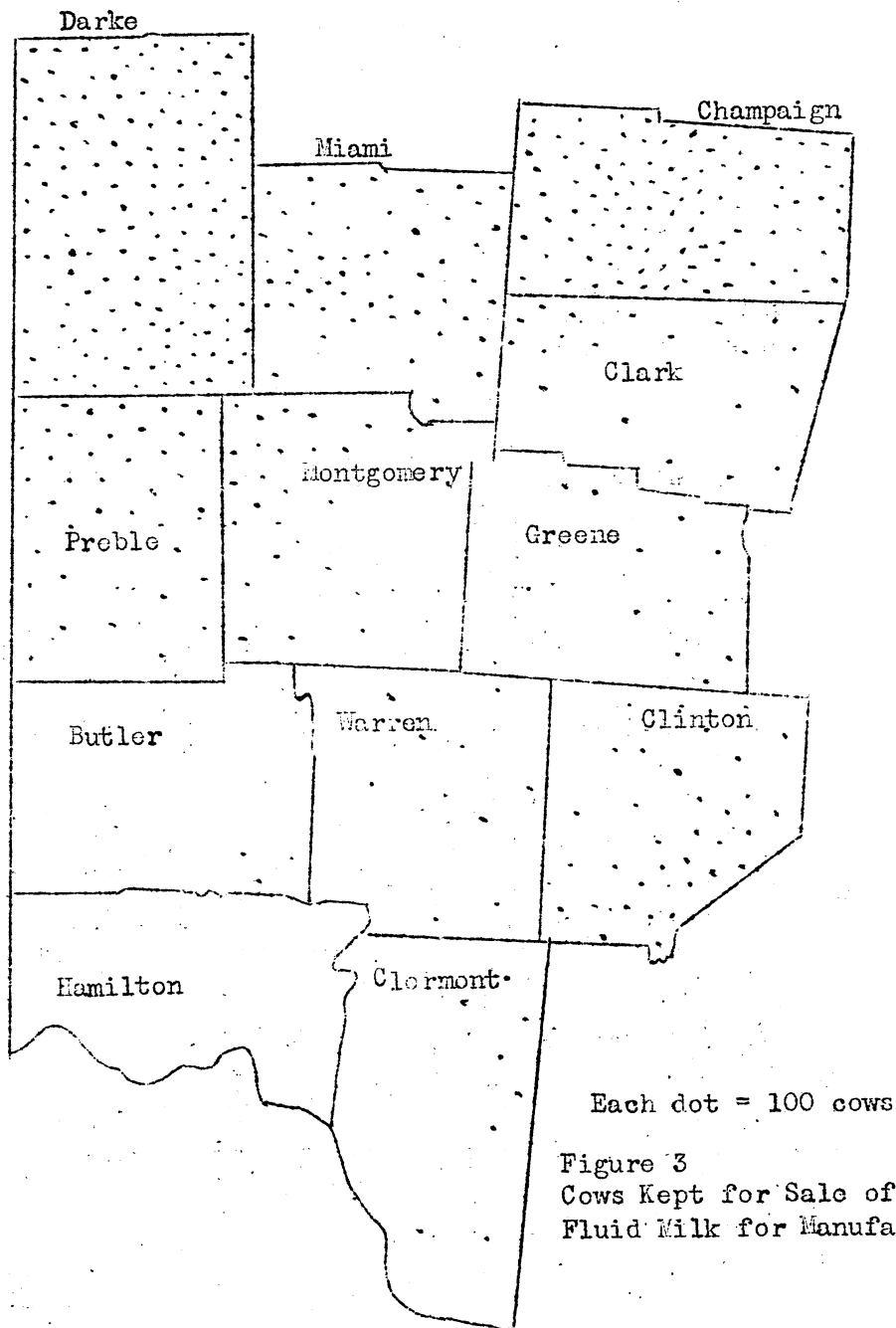
Table 9. Number of Dairy Farms and Milk Cattle, and Per cent of Each by Market Outlet
12 Southwestern Ohio Counties, 1941

| County | Total Number of Farms | Total Number of Milk Cattle | For fluid Consumption | | Fluid for Manufacture | | Butterfat | | Not Classified | |
|------------|-----------------------|-----------------------------|-----------------------|-------------|-----------------------|-------------|------------|-------------|----------------|-------------|
| | Farms | Cattle | Farms pct. | Cattle pct. | Farms pct. | Cattle pct. | Farms pct. | Cattle pct. | Farms pct. | Cattle pct. |
| Butler | 1,466 | 16,481 | 68.6 | 77.8 | 1.7 | 2.6 | 26.6 | 17.8 | 3.1 | 1.8 |
| Champaign | 1,550 | 19,541 | 9.8 | 13.6 | 63.4 | 66.9 | 22.5 | 16.7 | 4.3 | 2.8 |
| Clark | 1,269 | 16,862 | 42.2 | 57.3 | 16.5 | 16.1 | 35.6 | 24.0 | 5.7 | 2.6 |
| Clermont | 1,908 | 16,758 | 32.7 | 45.8 | 6.5 | 6.5 | 56.3 | 44.8 | 4.5 | 2.9 |
| Clinton | 1,360 | 12,319 | 23.4 | 33.9 | 38.9 | 37.1 | 29.9 | 23.9 | 7.8 | 5.1 |
| Darke | 3,258 | 27,098 | 7.0 | 9.5 | 72.4 | 72.7 | 17.5 | 15.5 | 3.1 | 2.3 |
| Greene | 1,639 | 16,659 | 56.5 | 67.8 | 11.1 | 8.7 | 28.7 | 21.5 | 3.7 | 2.0 |
| Hamilton | 1,049 | 10,679 | 59.2 | 74.6 | 0.7 | 0.5 | 35.0 | 22.6 | 5.1 | 2.3 |
| Miami | 2,038 | 21,727 | 35.1 | 43.6 | 35.1 | 33.7 | 24.7 | 20.1 | 5.1 | 2.6 |
| Montgomery | 1,860 | 17,012 | 44.6 | 54.5 | 19.8 | 18.1 | 30.9 | 24.7 | 4.7 | 2.7 |
| Preble | 1,853 | 17,151 | 24.5 | 33.5 | 34.9 | 33.6 | 36.9 | 30.6 | 3.7 | 2.3 |
| Warren | 1,467 | 15,466 | 62.6 | 74.8 | 8.3 | 6.9 | 22.9 | 15.1 | 6.2 | 3.2 |
| Total | 20,717 | 207,753 | 35.4 | 45.7 | 30.3 | 29.0 | 29.8 | 22.7 | 4.5 | 2.6 |

Table 10. Number of Milk Cattle per Farm by Market Outlet
12 Southwestern Ohio Counties, 1941

| County | Producer Distributor | Fluid to Distributor | Fluid for Manufacture | Butterfat | Not Classified | Total |
|------------|-------------------------|-------------------------|--------------------------|-----------|-------------------|-------|
| Butler | 16.0 | 12.6 | 17.1 | 7.5 | 6.4 | 11.2 |
| Champaign | 18.9 | 17.5 | 13.3 | 9.3 | 8.1 | 12.6 |
| Clark | 16.9 | 18.1 | 13.0 | 9.0 | 6.0 | 13.3 |
| Clermont | 14.5 | 12.1 | 8.8 | 7.0 | 5.6 | 8.8 |
| Clinton | 11.6 | 13.2 | 8.6 | 7.2 | 5.9 | 9.1 |
| Darke | 15.0 | 10.9 | 8.4 | 7.4 | 6.0 | 8.3 |
| Greene | 12.4 | 12.2 | 8.0 | 7.6 | 5.7 | 10.2 |
| Hamilton | 11.9 | 13.1 | 7.3 | 6.6 | 4.8 | 10.2 |
| Miami | 16.2 | 13.1 | 10.2 | 8.7 | 5.5 | 10.7 |
| Montgomery | 17.7 | 10.6 | 8.4 | 7.3 | 5.3 | 9.1 |
| Preble | 11.8 | 12.7 | 8.9 | 7.7 | 5.6 | 9.3 |
| Warren | 13.3 | 12.6 | 8.8 | 6.9 | 5.5 | 10.5 |
| Total | 14.3 | 12.8 | 9.6 | 7.6 | 5.8 | 10.0 |





Butler County

Butler County led the area in the matter of milk production for city consumption. Both in actual number of cows and in percent going into this usage, the county ranked first. Very little milk was sold for manufacturing uses and less than one-fifth of the farms sold butterfat. Its sale accounted for 20% of the farms in 7 of the 13 townships. In four townships, Fairfield, Lemon, Liberty and St. Clair, the milk from more than 90% of the cows was sold as city milk.

The county had an increase in number of farms from 2469 in 1930 to 2926 in 1940. This was due, in part, to some pick up in part time farming. It had some significance in market outlets of farms. There was probably some decrease in dairy farms selling to dealers and some increase in producer-distributors in townships close to the cities.

Most of the farmers producing milk for sale to city buyers were members of a cooperative association. The three associations serving the Cincinnati market as well as the Middletown Milk Association had membership in the county.

Butler County was in a peculiar situation with respect to Board of Health supervision of its milk supply. The U.S. Public Health service standard ordinance was adopted August 15, 1940 by the county and by the city of Middletown. The smaller towns were under the jurisdiction of the County Board of Health. The City of Hamilton, however, had not adopted the standard ordinance. In addition to the farms under inspection by these local boards there were a large number that were inspected by the City of Cincinnati for sale to its dealers.

The firms engaged in processing and distributing were listed at the time of the survey. This list was rechecked and revised in January 1942. At that time the firms reported were:

Milk Distributors

| | |
|-----------------------------------|------------------------------|
| Highland Park Dairy, Hamilton | Becks Dairy Farm, Middletown |
| Wehr Dairy Company, Hamilton | Maple Park Dairy, Middletown |
| H. R. Dilg & Sons, Hamilton | Stokes Dairy, Middletown |
| Avalon Dairy Company, Middletown | Carters Dairy, Middletown |
| National Dairy (Eichel), Hamilton | Miami Farms, Middletown |

Milk Distribution and Manufacturing Combined

Frechtling Dairy Company, Hamilton, Ice cream and condensed milk
 McGreevy Dairy, Hamilton, Ice cream and condensed milk
 Hamilton Milk Company, Hamilton, Ice cream and condensed milk

Manufacturing Plants

| | |
|-----------------------------------|----------------|
| Okeana Creamery Company, Okeana | Butter |
| Shera Cond. Milk Co., Oxford | Condensed milk |
| MacGregor Ice Cream Co., Hamilton | Ice Cream |
| Rauner Ice Cream Co., Hamilton | Ice Cream |
| Folker Ice Cream Co., Oxford | Ice Cream |
| Ohio Ice Cream Co., Hamilton | Ice Cream |

Producer distributors were an important factor in milk distribution in Butler County. In 1935 the Ohio Milk Marketing Commission had under license 71 producer-distributors. The survey recorded 13 of these operating in 1941.

There were reported an additional 32 in the survey that were not licensed in 1935. More than half of these were in St. Clair and Oxford Townships.

Table 11. Number of Dairy Farms and Milk Cattle, and Per cent of Each by Market Outlet, Butler County

| Township | Total Number of Farms | Total Number of Milk Cattle | For Fluid Consumption | | Fluid for Manufacture | | Butterfat | | Not Classified | |
|-----------|--------------------------------|--------------------------------------|--------------------------|--------|--------------------------|--------|-----------|--------|----------------|--------|
| | | | Farm | Cattle | Farm | Cattle | Farm | Cattle | Farm | Cattle |
| | | | pct. | pct. | pct. | pct. | pct. | pct. | pct. | pct. |
| Fairfield | 122 | 1472 | 86.1 | 93.3 | 0.0 | 0.0 | 13.9 | 6.7 | 0.0 | 0.0 |
| Hanover | 109 | 1262 | 76.1 | 84.0 | 0.0 | 0.0 | 23.9 | 16.0 | 0.0 | 0.0 |
| Lemon | 99 | 1053 | 85.9 | 91.0 | 2.0 | 3.1 | 12.1 | 5.9 | 0.0 | 0.0 |
| Liberty | 98 | 1469 | 86.7 | 93.3 | 0.0 | 0.0 | 8.2 | 4.6 | 5.1 | 2.1 |
| Madison | 129 | 1067 | 43.4 | 58.7 | 1.6 | 1.1 | 45.7 | 36.8 | 9.3 | 3.4 |
| Milford | 103 | 1179 | 74.8 | 77.4 | 0.0 | 0.0 | 22.3 | 20.9 | 2.9 | 1.7 |
| Morgan | 150 | 1559 | 58.0 | 66.1 | 0.0 | 0.0 | 41.3 | 33.2 | 0.7 | 0.7 |
| Oxford | 123 | 1152 | 34.9 | 49.7 | 3.3 | 2.6 | 58.5 | 45.9 | 3.3 | 1.8 |
| Reily | 124 | 1079 | 56.5 | 66.2 | 0.8 | 0.4 | 41.1 | 31.7 | 1.6 | 1.7 |
| Ross | 86 | 975 | 73.3 | 84.6 | 0.0 | 0.0 | 20.9 | 9.5 | 5.8 | 5.9 |
| St. Clair | 85 | 971 | 87.1 | 94.0 | 0.0 | 0.0 | 8.2 | 4.3 | 4.7 | 1.7 |
| Union | 114 | 1790 | 69.3 | 70.7 | 14.0 | 19.5 | 9.7 | 5.7 | 7.0 | 4.1 |
| Wayne | 124 | 1453 | 79.0 | 83.5 | 0.0 | 0.0 | 19.4 | 15.6 | 1.6 | 0.9 |
| County | 1466 | 16481 | 68.6 | 77.8 | 1.7 | 2.6 | 26.6 | 17.8 | 3.1 | 1.8 |

Champaign County

Champaign County was lowest in this district in number of farms from which milk was sold for fluid consumption. The milk from only 132 farms was being sold through this market channel. Almost two-thirds of the milk was being sold for use in manufacturing while butterfat accounted for one-sixth of the sales. No township had less than 40% of its production going for manufacturing uses and only two townships had as much as one third going for fluid uses.

The county had no standard ordinance for milk supervision. Urbana had a local health code. About 25% of the supply was pasteurized. One plant in Mechanicsburg was qualified to sell in Madison County under the U.S. Public Health service standard ordinance.

Milk distributors and Manufacturing Plants as of January, 1942 were:

Milk Distributors

Wm W. Millice, Mechanicsburg Groves Dairy Company, Urbana
Springfield Dairy Products Co., Thackery Quality Creamery Co., Urbana

Manufacturing Plants

| | | |
|-----------------------------|----------|-----------------------------------|
| Thackery Creamery Company | Thackery | Butter |
| McCrery Creamery Co. | Urbana | Condensed milk, Ice cream, Cheese |
| Springfield Dairy Prod. Co. | Thackery | Butter, Ice cream, Condensed milk |

In 1935 the Ohio Milk Marketing Commission licensed 32 producer-distributors. Eight of these were reported as still operating in 1941. Nine more were reported in 1941 that were not licensed in 1935.

Table 12. Number of Dairy Farms and Milk Cattle, and Per cent of Each by Market Outlet, Champaign County

| Township | Total Number of Farms | Total Number of Milk Cattle | For Fluid Consumption | | Fluid for Manufacture | | Butterfat | | Not Classified | |
|-----------|--------------------------------|--------------------------------------|--------------------------|----------------|--------------------------|----------------|---------------|----------------|-------------------|----------------|
| | | | Farms pat. | Cattle pct. | Farms pct. | Cattle pct. | Farms pct. | Cattle pct. | Farms pct. | Cattle pct. |
| Adams | 120 | 1250 | 3.3 | 3.5 | 61.7 | 68.1 | 27.5 | 23.3 | 7.5 | 5.1 |
| Concord | 130 | 1513 | 3.9 | 4.9 | 89.2 | 90.1 | 5.4 | 4.0 | 1.5 | 1.0 |
| Goshen | 110 | 1384 | 1.8 | 2.7 | 36.4 | 51.6 | 59.1 | 43.5 | 2.7 | 2.2 |
| Harrison | 81 | 995 | 12.4 | 19.4 | 77.8 | 70.6 | 8.6 | 9.5 | 1.2 | 0.5 |
| Jackson | 152 | 1597 | 25.7 | 34.2 | 44.7 | 42.7 | 23.7 | 17.9 | 5.9 | 5.2 |
| Johnson | 120 | 1401 | 11.7 | 12.9 | 48.3 | 56.9 | 31.7 | 24.7 | 8.3 | 5.5 |
| Mad River | 189 | 2219 | 9.5 | 16.1 | 73.0 | 73.7 | 12.2 | 6.5 | 5.3 | 3.7 |
| Rush | 114 | 1869 | 1.8 | 2.2 | 56.1 | 63.9 | 41.2 | 33.0 | 0.9 | 0.9 |
| Salem | 174 | 2410 | 3.4 | 5.3 | 82.2 | 85.9 | 11.5 | 7.0 | 2.9 | 1.8 |
| Union | 125 | 1578 | 20.8 | 34.9 | 43.2 | 40.9 | 36.0 | 24.2 | 0.0 | 0.0 |
| Urbana | 134 | 2063 | 17.9 | 24.0 | 66.4 | 68.0 | 7.5 | 4.1 | 8.2 | 3.9 |
| Wayne | 101 | 1262 | 1.0 | 1.2 | 75.3 | 80.7 | 17.8 | 14.3 | 5.9 | 3.8 |
| County | 1550 | 19541 | 9.8 | 13.6 | 63.4 | 66.9 | 22.5 | 16.7 | 4.3 | 2.8 |

Clark County

The fluid milk outlet was the principal one for this county, accounting for production from 57.3% of the cows. Butterfat was second in importance with 24% and fluid manufacturing third. In all but four townships the fluid use channels took the milk from over half of the cows. The sale of butterfat accounted for the product of 30% or more of the cows in only three townships, Harmony, Madison and Pleasant, all of which were in the east end of the county.

The farms of Clark and Champaign Counties average higher in number of dairy cows per farm than the area as a whole. As shown in Table 3, Clark County topped the area with 9.8 cows per farm. The average for the 12 counties was 7.4 cows.

Sales by producer-distributors appeared to be on the decline in Clark County. There were 53 licensed in 1935 under the Burk Act. Only 10 of these were listed in the survey as in business in 1941. The reporters listed an additional 13 farms, making 23 in all in 1941.

Springfield had a milk code which provided that all milk sold within the city limits must be pasteurized. There were approximately 600 producers under inspection and the supply at the time of the survey was stable. Clark County enforced no regulations with respect to milk.

Milk distributors and manufacturing plants as of January, 1942 were,

Milk Distributors

| | |
|-------------------------------------|-------------------------------------|
| Citizens Dairy Company, Springfield | R. A. Haley, Springfield |
| H. F. Kohl Dairy, Springfield | Rader Dairy, Springfield |
| Long Branch Dairy, Springfield | Fred Shaffer, Springfield |
| Riverdale Farm Dairy, Springfield | Excel Dairy, Springfield |
| Borden's, Springfield | Mechanicsburg, Dairy, Mechanicsburg |
| P. D. Cosmos Co., Springfield | Snow Hill Dairy, Springfield |
| Burnett Road Dairy, Springfield | Bewans Dairy, Springfield |

Manufacturing Plants

| | | |
|-------------------------------|----------------------|--------|
| Lawrenceville Creamery | Springfield, R.D. #7 | Butter |
| Thomas Cottage Cheese Company | Springfield | Cheese |

Table 13. Number of Dairy Farms and Milk Cattle, and Per cent of Each
by Market Outlet, Clark County

| Township | Total Number of Farms | Total Number of Milk Cattle | For Fluid | | Fluid for | | Butterfat | | Not | |
|-------------|--------------------------------|--------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|------------|-------------|
| | | | Consumption | Farm Cattle | Manufacture | Farm Cattle | Farm Cattle | Farm Cattle | Classified | Farm Cattle |
| | | | pct. | pct. | pct. | pct. | pct. | pct. | pct. | pct. |
| Bethel | 164 | 2016 | 53.7 | 68.3 | 7.9 | 6.5 | 36.6 | 24.0 | 1.8 | 1.2 |
| German | 145 | 1676 | 47.6 | 57.8 | 12.4 | 13.2 | 35.2 | 26.9 | 4.8 | 2.1 |
| Green | 122 | 1580 | 54.1 | 68.3 | 2.4 | 5.0 | 36.1 | 22.0 | 7.4 | 4.7 |
| Harmony | 88 | 1080 | 23.9 | 37.8 | 28.4 | 27.7 | 46.6 | 34.2 | 1.1 | .3 |
| Madison | 75 | 1009 | 14.7 | 24.0 | 16.0 | 22.4 | 60.0 | 49.3 | 9.3 | 4.3 |
| Mad River | 94 | 1579 | 58.5 | 76.3 | 3.2 | 4.2 | 34.0 | 18.5 | 4.3 | 1.0 |
| Moorfield | 111 | 1894 | 45.1 | 65.4 | 20.7 | 16.1 | 26.1 | 15.7 | 8.1 | 2.8 |
| Pike | 186 | 2067 | 26.9 | 31.0 | 38.7 | 40.0 | 30.6 | 25.9 | 3.8 | 3.1 |
| Pleasant | 118 | 1333 | 14.4 | 26.0 | 28.8 | 34.1 | 46.6 | 35.5 | 10.2 | 4.4 |
| Springfield | 166 | 2628 | 65.7 | 82.1 | 3.6 | 4.0 | 22.9 | 11.7 | 7.8 | 2.2 |
| County | 1269 | 16862 | 42.2 | 57.3 | 16.5 | 16.1 | 35.6 | 24.0 | 5.7 | 2.6 |

Clermont County

This county was the heaviest in the area in sale of butterfat - both on a percentage basis and in number of cattle. Fifty-six percent of the farms with three or more dairy cattle were selling sour cream, accounting for about 45% of the cattle. In 1929 the census reported 61% of all farms milking cows as selling butterfat. In four of the townships on the west side of the county, Batavia, Goshen, Miami and Union, the milk from over 50% of the cows was sold for fluid use. There was a substantial amount of milk going for manufacture from the townships of Jackson, Wayne and Williamsburg.

In Board of Health control, this county was in something of a transition stage. During the time the Burk Act was in force the county had a part time health commissioner. After the act expired the commissioner was dropped. At the time of the survey the county again had a health commissioner. A laboratory was being set up for milk sanitation control. This was an attempt to prepare for legislation to follow.

Armleders Dairy Products Company distributes milk and also manufactures

butter and ice cream. This is the only distributing or processing plant of importance located within the county.

Distribution by producer-distributors was more important in Clermont County than that by distributors. There were 81 licensed in 1935 under the Burk Act. Of these 24 were reported as still in business in 1941. In addition, 33 farms were reported in 1941 that were not licensed in 1935.

Table 14. Number of Dairy Farms and Milk Cattle, and Per cent of Each by Market Outlet, Clermont County

| Township | Total Total | | For Fluid | | Fluid for | | Butterfat | | Classified | |
|--------------|-------------------------|-----------------------------|------------------------------------|------|------------------------------------|------|---------------------|------|---------------------|------|
| | Num- ber of Farms | Number of Milk Cattle | Consumption Farm Cattle pct. | pct. | Manufacture Farm Cattle pct. | pct. | Farm Cattle pct. | pct. | Farm Cattle pct. | pct. |
| Batavia | 176 | 1798 | 51.1 | 67.5 | 0.0 | 0.0 | 43.8 | 30.2 | 5.1 | 2.3 |
| Franklin | 175 | 1269 | 5.7 | 7.1 | 2.9 | 4.3 | 88.0 | 84.6 | 3.4 | 4.0 |
| Goshen | 119 | 1357 | 68.9 | 77.9 | 1.7 | .8 | 23.5 | 18.6 | 5.9 | 2.7 |
| Jackson | 100 | 871 | 36.0 | 42.1 | 30.0 | 33.2 | 28.0 | 22.2 | 6.0 | 2.5 |
| Miami | 137 | 1375 | 66.4 | 79.9 | 0.0 | 0.0 | 27.0 | 16.1 | 6.6 | 4.0 |
| Monroe | 160 | 1238 | 15.0 | 26.2 | 5.0 | 5.2 | 76.2 | 65.3 | 3.8 | 3.3 |
| Ohio | 69 | 574 | 39.1 | 47.6 | 4.4 | 3.5 | 46.4 | 40.9 | 10.1 | 8.0 |
| Pierce | 80 | 615 | 28.8 | 46.2 | 0.0 | 0.0 | 65.0 | 50.9 | 6.2 | 2.9 |
| Stonelick | 121 | 904 | 28.1 | 36.4 | 5.0 | 4.1 | 65.3 | 58.1 | 1.6 | 1.4 |
| Tate | 250 | 2054 | 21.2 | 30.6 | 3.6 | 3.1 | 72.8 | 64.0 | 2.4 | 2.3 |
| Union | 127 | 1277 | 53.5 | 72.7 | 0.8 | 0.5 | 37.8 | 23.7 | 7.9 | 3.1 |
| Washington | 135 | 1040 | 11.1 | 15.2 | 3.7 | 7.2 | 83.7 | 74.6 | 1.5 | 3.0 |
| Wayne | 118 | 1116 | 35.6 | 48.6 | 18.6 | 16.7 | 45.8 | 34.7 | 0.0 | 0.0 |
| Williamsburg | 141 | 1270 | 19.9 | 30.2 | 23.4 | 22.3 | 48.9 | 44.3 | 7.8 | 3.2 |
| County | 1908 | 16758 | 32.7 | 45.8 | 6.5 | 6.5 | 56.3 | 44.8 | 4.5 | 2.9 |

Clinton County

The milk from this county was fairly evenly divided among the three outlets. In the west half of the county the fluid use outlet predominated while in the eastern half the manufacturing outlet accounted for most of the milk. The butterfat outlet was the predominating one in two townships, Adams and Chester, but there were several others for which butterfat was important.

Both the County and Wilmington were operating under milk regulation and joined in the employment of a sanitarian. Neither of the codes were the standard ordinance, but they contained many of the provisions of the ordinance. Farms to be admitted to the market must score at least 80 on the score card of the State Department of Agriculture.

Distributors and producers were put under license. The laboratory work for the Department was done by the Sanitarian at Wilmington College with the assistance of a student.

There was at the time of the survey no immediate interest in adopting the standard ordinance. The aim was to bring the existing regulations into full enforcement.

Milk Distributors

Grogans Dairy, Wilmington
 Linton & Linton, Wilmington
 Ernest L. Service, Sabina
 Bailey & Doctor, Wilmington
 Shank Bros., Blanchester

There were 44 producer-distributors licensed under the Burk Act in 1935. Of these 14 were reported as in business in 1941. Only three additional farms were listed in this classification by those who reported in 1941.

Table 15. Number of Dairy Farms and Milk Cattle and Per cent of Each by Market Outlet, Clinton County

| Township | Total Number of Farms | Total Number of Milk Cattle | For Fluid Consumption | | Fluid for Manufacture | | Butterfat | | Not Classified | |
|------------|--------------------------------|--------------------------------------|--------------------------|------|--------------------------|------|---------------------|------|---------------------|------|
| | | | Farm Cattle pct. | pct. | Farm Cattle pct. | pct. | Farm Cattle pct. | pct. | Farm Cattle pct. | pct. |
| Adams | 67 | 742 | 46.2 | 66.0 | 6.0 | 5.5 | 44.8 | 27.1 | 3.0 | 1.4 |
| Chester | 90 | 886 | 34.4 | 42.9 | 10.0 | 8.7 | 48.9 | 38.8 | 6.7 | 9.6 |
| Clark | 151 | 1365 | 2.7 | 3.7 | 72.8 | 79.1 | 17.9 | 13.5 | 6.6 | 3.7 |
| Green | 180 | 1315 | 7.2 | 7.2 | 69.5 | 70.3 | 19.4 | 19.2 | 3.9 | 3.3 |
| Jefferson | 93 | 799 | 18.3 | 26.4 | 57.0 | 55.3 | 20.4 | 15.5 | 4.3 | 2.8 |
| Liberty | 84 | 706 | 22.6 | 28.7 | 26.2 | 29.5 | 47.6 | 39.4 | 3.6 | 2.4 |
| Marion | 126 | 1272 | 37.3 | 55.7 | 18.3 | 15.6 | 37.3 | 25.6 | 7.1 | 3.1 |
| Richland | 73 | 624 | 5.5 | 13.3 | 47.9 | 49.2 | 45.2 | 36.7 | 1.4 | .8 |
| Union | 175 | 1871 | 34.3 | 51.5 | 20.0 | 19.0 | 24.0 | 17.7 | 21.7 | 11.8 |
| Vernon | 87 | 795 | 40.2 | 53.3 | 17.2 | 15.5 | 39.1 | 29.2 | 3.5 | 2.0 |
| Washington | 77 | 756 | 42.8 | 43.8 | 29.9 | 37.8 | 19.5 | 13.9 | 7.8 | 4.5 |
| Wayne | 86 | 653 | 26.8 | 34.3 | 48.8 | 44.9 | 16.3 | 15.5 | 8.1 | 5.3 |
| Wilson | 71 | 535 | 1.4 | .8 | 46.5 | 43.9 | 38.0 | 45.2 | 14.1 | 10.1 |
| County | 1360 | 12319 | 23.4 | 33.9 | 38.9 | 37.1 | 29.9 | 23.9 | 7.8 | 5.1 |

Darke County

This county led all others in this area in both number of farms and cows and in percent of each going into manufacturing channels. The milk from over 72% of the cows was sold for manufacturing. Less than 10% was sold for fluid use and butterfat accounted for the remainder. In every township the manufacturing outlet accounted for over 50% of the milk. This county had almost as many farms selling for manufacturing uses as the 3 next highest counties of this area combined.

The county and the city of Greenville were operating under a local health code adopted in 1929.

Milk distributors and manufacturing plants as of January, 1942, were:

Milk Distributors

Greenville Coop Dairy, Greenville
 Marshall Dairy, Greenville
 Sunny Dale Dairy, Union City
 Ullery Dairy, Greenville
 Grays Dairy, Arcanum

Manufacturing Plants

| | | |
|-----------------------------------|------------|-----------------|
| Sherman White Company | Greenville | Butter |
| Producers Creamery & Cold Storage | Greenville | Butter |
| Nestles Milk Products, Inc. | Greenville | Evaporated milk |

In 1935 the Ohio Milk Marketing Commission licensed 57 producer-distributors. Of these only 11 were checked in 1941 as producer-distributors by those who assisted in the survey. Seven additional names were checked in the 1941 survey making a total of only 18 producer-distributors of record for the county.

Table 16. Number of Dairy Farms and Milk Cattle and Per cent of Each
by Market Outlet, Darke County

| Township | Total Number of Farms | Total Number of Milk Cattle | For Fluid | | Fluid for | | Butterfat | | Not | |
|--------------|--------------------------------|--------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|------------|-------------|
| | | | Consumption | Farm Cattle | Manufacture | Farm Cattle | Farm Cattle | Farm Cattle | Classified | Farm Cattle |
| | | | pct. | pct. | pct. | pct. | pct. | pct. | pct. | pct. |
| Adams | 185 | 1609 | 10.3 | 14.2 | 81.1 | 77.3 | 8.6 | 8.5 | 0.0 | 0.0 |
| Allen | 170 | 1180 | 4.7 | 3.7 | 69.4 | 78.2 | 21.2 | 13.8 | 4.7 | 4.3 |
| Brown | 148 | 1131 | 4.7 | 9.0 | 74.3 | 74.6 | 13.5 | 11.8 | 7.5 | 4.6 |
| Butler | 197 | 1605 | 1.0 | 0.4 | 66.0 | 70.4 | 33.0 | 29.2 | 0.0 | 0.0 |
| Franklin | 171 | 1418 | 14.0 | 17.6 | 70.8 | 69.5 | 12.3 | 10.9 | 2.9 | 3.0 |
| Greenville | 256 | 2477 | 23.0 | 26.6 | 51.6 | 52.4 | 19.9 | 16.9 | 5.5 | 4.1 |
| Harrison | 143 | 1234 | 1.4 | 3.4 | 88.8 | 86.6 | 4.2 | 5.4 | 5.6 | 4.6 |
| Jackson | 161 | 1370 | 5.6 | 5.7 | 69.0 | 71.6 | 21.7 | 20.7 | 3.7 | 2.0 |
| Liberty | 158 | 1326 | 1.9 | 3.0 | 83.5 | 83.4 | 8.9 | 9.3 | 5.7 | 4.3 |
| Mississinawa | 149 | 1103 | 2.7 | 3.4 | 70.5 | 70.4 | 26.8 | 26.2 | 0.0 | 0.0 |
| Monroe | 172 | 1451 | 4.1 | 4.6 | 82.0 | 80.9 | 10.4 | 11.6 | 3.5 | 2.9 |
| Neave | 128 | 1103 | 8.6 | 10.9 | 46.1 | 55.2 | 37.5 | 29.6 | 7.8 | 4.3 |
| Patterson | 137 | 1121 | 0.7 | 1.3 | 80.3 | 82.3 | 19.0 | 16.4 | 0.0 | 0.0 |
| Richland | 107 | 1051 | 6.5 | 8.8 | 72.0 | 74.8 | 20.6 | 16.1 | 0.9 | 0.3 |
| Twin | 201 | 1521 | 2.5 | 2.6 | 88.1 | 86.8 | 8.9 | 10.3 | 0.5 | 0.3 |
| VanBuren | 188 | 1556 | 13.8 | 18.2 | 71.8 | 70.3 | 9.1 | 8.4 | 5.3 | 3.1 |
| Wabash | 139 | 1063 | 0.7 | 1.0 | 79.1 | 80.5 | 20.2 | 18.5 | 0.0 | 0.0 |
| Washington | 154 | 1500 | 14.9 | 25.2 | 57.1 | 53.2 | 23.4 | 18.8 | 4.6 | 2.8 |
| Wayne | 176 | 1329 | 4.0 | 4.2 | 75.0 | 76.9 | 18.2 | 16.2 | 2.8 | 2.7 |
| York | 118 | 950 | 1.7 | 1.8 | 80.5 | 82.5 | 17.8 | 15.7 | 0.0 | 0.0 |
| County | 3258 | 27098 | 7.0 | 9.5 | 72.4 | 72.7 | 17.5 | 15.5 | 3.1 | 2.3 |

Greene County

This county, with over two-thirds of the milk going for fluid use, was the third heaviest in the area in sales through fluid use channels. Less than 10% was sold for manufacturing use and a little over 20% as butterfat. In all but three townships the fluid use channel was by far the most important outlet. Sour cream accounted for almost 70% from Ross Township and in Jefferson Township manufacturing was the predominating outlet.

Caesars Creek with 99.4%, Beaver Creek with 91.6 and Spring Valley with 89.4% of the cattle classified for fluid consumption were the outstanding townships in this group.

The county and the city of Xenia operated health regulations jointly. A sanitarian under both Health Boards was making farm and plant inspections at the time of the survey. The standard ordinance was in process of adoption for the county.

Milk Distributors

Confer Dairy Products Co., Xenia Moores & Sons Dairy Co., Xenia
 Ringer & Son Dairy, Xenia, R. #2 Harry Hamman, Cedarville
 Alpha Dairy, Alpha

Manufacturing Plants

Ohio Western Creamery Xenia Condensed milk
 The Springfield Purity Products Co., Xenia Ice cream and other products

There were 28 producer-distributors licensed under the Burk Act in 1935. Five of these were listed as operating in 1941. There were 29 farmers not in the above list reported as producer-distributors in the survey of 1941. Of these 13 were in Bath Township.

Table 17. Number of Dairy Farms and Milk Cattle and Per Cent of Each by Market Outlet, Greene County

| Township | Total Number of Farms | Total Number of Milk Cattle | For Fluid Consumption | | Fluid for Manufacture | | Butterfat | | Not Classified | |
|------------------|--------------------------------|--------------------------------------|--------------------------|----------------|--------------------------|----------------|--------------|----------------|-------------------|----------------|
| | | | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. |
| Bath | 112 | 1403 | 74.1 | 79.1 | 4.5 | 4.4 | 21.4 | 16.5 | 0.0 | 0.0 |
| Beaver Creek | 198 | 2746 | 84.4 | 91.6 | 2.0 | 1.0 | 9.6 | 5.7 | 4.0 | 1.7 |
| Caesars Creek | 108 | 965 | 99.1 | 99.4 | 0.0 | 0.0 | 0.9 | 0.6 | 0.0 | 0.0 |
| Cedarville | 135 | 1555 | 44.4 | 53.1 | 9.6 | 11.7 | 39.3 | 32.4 | 6.7 | 2.8 |
| Jefferson | 129 | 818 | 16.3 | 19.4 | 48.8 | 48.3 | 32.6 | 29.4 | 2.3 | 2.9 |
| Miami | 109 | 1196 | 66.1 | 75.0 | 2.7 | 3.3 | 25.7 | 18.5 | 5.5 | 3.2 |
| New Jasper | 112 | 815 | 20.5 | 27.2 | 36.6 | 34.1 | 36.6 | 34.9 | 6.3 | 3.8 |
| Ross | 74 | 701 | 1.3 | 4.0 | 9.5 | 19.5 | 78.4 | 68.8 | 10.8 | 7.7 |
| Silver Creek | 120 | 826 | 36.7 | 47.5 | 26.6 | 23.7 | 31.7 | 25.3 | 5.0 | 3.5 |
| Spring Valley | 117 | 1345 | 83.7 | 89.4 | 4.3 | 3.3 | 7.7 | 5.0 | 4.3 | 2.3 |
| Sugar Creek | 152 | 1413 | 71.7 | 75.7 | 0.7 | 0.6 | 27.6 | 23.7 | 0.0 | 0.0 |
| Xenia | 273 | 2876 | 51.7 | 66.4 | 2.9 | 2.7 | 42.5 | 29.4 | 2.9 | 1.5 |
| County | 1639 | 16659 | 56.5 | 67.8 | 11.1 | 8.7 | 28.7 | 21.5 | 3.7 | 2.0 |

In Hamilton County three-fourths of the milk went into the fluid use channel and about one-fourth into butterfat. This county had the smallest number of dairy cattle of the twelve counties. In all but two townships the fluid use channel was the dominating outlet in terms of number of cows involved. There were 141 milk producers in Hamilton County who were selling all or part of their milk at retail.

Hamilton County was the largest center of population in the area under study. There were several incorporated cities and towns in the county. Of these at least five function as separate health districts. They are Cincinnati, Norwood, Lockland, Reading and St. Bernard. Hamilton County also operates under a local ordinance adopted in 1921. There was a marked difference in the stringency of the regulations among these health districts. Cincinnati, Norwood and Reading have codes that forbids the sale of any unpasteurized milk in the city.

None of these health districts had actually adopted the standard ordinance, but the provisions of the codes included many of the requirements as are in the standard ordinance.

An effort is made in the lists below to classify firms selling milk or operating processing plants as of January, 1942. Producer-distributors who distribute only the milk produced on their farms are not included.

Firms specializing in milk distribution:

| | |
|----------------------------|-------------------------------------|
| Avondale Dairy | 36 Clinton Springs, Cincinnati |
| G. H. Berling, Inc. | 4760 Paddock Rd., Cincinnati |
| J. H. Berling D. Prod. Co. | 3726 Lonsdale Avenue, Cincinnati |
| Geo. Bosse Dairy | 786 Delhi, Cincinnati |
| Beechwood Farms Dairy | 7053 Montgomery Rd., Silverton, O. |
| Coors Bros. Co. | 5106 Gray Road, Cincinnati |
| J. H. Feilman Dairy | 2519 Vine Street, Cincinnati |
| Clermont Springs Dairy | W. 2, New Richmond, O. |
| W. E. Hey | 225 Monitor Avenue, Cincinnati |
| East End Dairy | 267 E. Broadway, Loveland |
| John C. Mandery & Son | 2045 Harrison Avenue, Cincinnati |
| Albert Feldhaus Dairy | 3d & Benson Sts., Reading, O. |
| Matthews-Frechtling Dairy | 2363 St. James Avenue, Cincinnati |
| Harry Mause | 4442 Glenway Avenue, Cincinnati |
| Pine Hill Farm - Fields | Ertel Rd., Sharonville, Ohio |
| Henry Meyer & Son | John & Elliot Sts., Lockland |
| H. Miller Dairy Co. | 656 E. McMillan, Cincinnati |
| Cedar Hill Farms, Inc. | 1914 Dane Avenue, Cincinnati |
| Cedar Hills Farms | R. #1, Madisonville, Cincinnati |
| L. Meyers Dairy | 3328 Glenmore Avenue, Cincinnati |
| Geo. T. Niehoff Dairy | 2311 Shadwell Avenue, Cincinnati |
| John Stempfely | 4823 Reading Rd., Cincinnati |
| J. T. Ruther & Sons Co. | 4112 Gordon St., Cincinnati |
| Joseph Sillies & Son | 2138 Selim Avenue, Cincinnati |
| Geo. Thaman | 1201 Reading Road, Cincinnati |
| Townshend West Dairy | 1020 Plum Street, Cincinnati |
| Tri-County Dairy | Loveland, O. |
| J. Weber Dairy | 136 Glenwood Avenue, Cincinnati |
| United Dairy Farmers | 3955 Montgomery Rd., Norwood |
| Meyer & Ruther Dairy | Bridgeton Rd., Cincinnati |
| Willson Dairy Products | 2125 Reading Rd., Cincinnati |
| Jos. F. Witsken Dairy | 4997 Warsaw-Cleves Pike, Cincinnati |

Woodmont Dairy Co.
 Benson & Bell Dairy
 Summe Bros. Dairy
 Hyde Park Dairy Co.
 Kaesemeyer & Sons Co.
 H. Woebkenberg Dairy Co.
 August Hinnekamp
 Hollman Bros.

Deer Park, Cincinnati
 Harrison
 Mt. Healthy
 3755 Edwards Rd., Norwood
 5612 Carthage, Norwood
 15 W. Vorhees St., Reading
 4420 Sullivan Ave., St. Bernard
 56 Euclid Ave., Wyoming, O.

Milk Distribution and Manufacturers combined:

French Bauer, Inc.
 Kroger Grocery & Baking Co.
 Frechtling Dairy Co.

1020 Plum St., Cincinnati
 2020 Florence Avenue, Cincinnati
 Hamilton

Manufacturing

| | | |
|-----------------------------|----------------------------------|-----------|
| Niser Ice Cream Co. | Cincinnati | Ice Cream |
| Beatrice Creamery Co. | 943 Carr St., Cincinnati | Butter |
| Merchants Creamery Co. | 528 Lungster St., Cincinnati | Butter |
| Tri-State Butter Co. | 950 Kenyon Avenue, Cincinnati | Butter |
| Cupid Ice Cream Co. | 2449 W. McMicken St., Cincinnati | Ice Cream |
| DeHaven Ice Cream Co. | 708 Harriet St., Cincinnati | Ice Cream |
| Lindner Bros. Ice Cream Co. | 3740 Main Ave., Cincinnati | Ice Cream |
| Soldier Boy Ice Cream Co. | 123 E. Court St., Cincinnati | Ice Cream |
| Polar Ice Cream Co. | 6018 Montgomery Rd., Norwood | Ice Cream |
| Thompson Ice Cream Co. | 2179 Selim Ave., Norwood | Ice Cream |
| Frank Ice Cream Co. | 410 Wyoming Ave., Lockland | Ice Cream |
| Neffs Dairy Company | Washington & Montgomery, Norwood | Ice Cream |

One of the most striking features of the milk marketing situation in Hamilton County was the evidence of a substantial increase in the sale of milk direct to the consumer at the farm.

In 1935 the Ohio Milk Marketing Commission had under license 19 producer-distributors. Of these 10 were reported as operating in 1941. In addition to these the survey revealed 131 farms from which milk was sold to consumers. This appears to be the greatest concentration of sales direct from farms so far found in any of the areas covered. This may have been due in part to the increase in part time farming. In 1930 the census recorded 3692 farms in the county and in 1940 it had risen to 4163.

Table 18. Number of Dairy Farms and Milk Cattle and Per cent of Each by Market Outlet, Hamilton County

| Township | Total Number of Farms | Total Number of Milk Cattle | For Fluid Consumption Farm Cattle | | Fluid for Manufacture Farm Cattle | | Butterfat Farm Cattle | | Not Classified Farm Cattle | |
|-------------|--------------------------------|--------------------------------------|---|------|---|------|--------------------------|------|----------------------------------|------|
| | | | pct. | pct. | pct. | pct. | pct. | pct. | pct. | pct. |
| Anderson | 89 | 636 | 20.2 | 32.4 | 0.0 | 0.0 | 65.2 | 60.5 | 14.6 | 7.1 |
| Celeraim | 199 | 1746 | 64.3 | 75.4 | 0.0 | 0.0 | 29.2 | 21.5 | 6.5 | 3.1 |
| Columbia | 22 | 276 | 68.2 | 88.8 | 0.0 | 0.0 | 13.6 | 5.4 | 18.2 | 5.8 |
| Crosby | 64 | 634 | 48.4 | 65.5 | 1.6 | 1.1 | 50.0 | 33.4 | 0.0 | 0.0 |
| Delhi | 20 | 339 | 80.0 | 90.3 | 5.0 | 2.6 | 15.0 | 7.1 | 0.0 | 0.0 |
| Greene | 146 | 1215 | 45.2 | 66.7 | 3.4 | 2.9 | 41.1 | 25.7 | 10.3 | 4.7 |
| Harrison | 76 | 894 | 60.5 | 79.5 | 0.0 | 0.0 | 39.5 | 20.5 | 0.0 | 0.0 |
| Miami | 46 | 375 | 19.6 | 33.9 | 0.0 | 0.0 | 71.7 | 52.8 | 8.7 | 13.3 |
| Mill Creek | | | No Market Importance | | | | | | | |
| Springfield | 162 | 2124 | 96.3 | 96.8 | 0.0 | 0.0 | 3.7 | 3.2 | 0.0 | 0.0 |
| Sycamore | 116 | 1299 | 66.4 | 76.6 | 0.0 | 0.0 | 30.2 | 22.2 | 3.4 | 1.2 |
| Symmes | 35 | 354 | 75.7 | 65.7 | 0.0 | 0.0 | 34.3 | 24.3 | 0.0 | 0.0 |
| Whitewater | 74 | 787 | 48.6 | 65.0 | 0.0 | 0.0 | 50.0 | 33.7 | 1.4 | 1.3 |
| County | 1049 | 10679 | 59.2 | 74.6 | 0.7 | 0.5 | 35.0 | 22.6 | 5.1 | 2.3 |

Miami County

This county was second high of the twelve counties in number of dairy cattle. The product of about 44% of the cows went through fluid use outlets, about 34% through manufacturing and a little more than 25% into butterfat.

The difference between the size of herds in the different market outlets was very striking. The farms from which milk was sold for fluid consumption, representing 35% of the total had 44% of the cows, while the 25% of the farms from which sour cream was sold had only 20% of the cows.

In only two townships of this county were there as many as half of the farms selling sour cream. There were 716 farms selling milk for fluid consumption and the same number selling milk through manufacturing outlets.

Miami County and Troy were operating jointly under the U.S. Public Health service standard ordinance. It was adopted in 1938 and went into full force September 1, 1941. Piqua had a local code of regulations.

Milk distributors and manufacturing plants, January, 1942, were:

Milk Distributors

Miami County Dairy Co., Troy
Farmers Coop. Dairy, Troy
Percy C. Brown, West Milton

Sanders Dairy, Piqua
Kiefers Dairy, Piqua
Kelleys Dairy, Troy

Manufacturing Plants

| | | |
|------------------------------|-----------------|-----------------------------|
| Westerville Creamery Co. | Covington | Condensed & evaporated milk |
| Blacks Creamery Co. | Piqua | Butter |
| Piqua Dairy Products Co. | Piqua | Butter and ice cream |
| Hoffman Dairy Products Co. | Tippecanoe City | Butter and ice cream |
| Neals Creamery Co. | Troy | Ice Cream |
| Favorite City Milk Prod. Co. | Piqua | Butter and ice cream |
| Lange Products Co. | Piqua | Butter and ice cream |

There were 52 producer-distributors under license by the Ohio Milk Marketing Commission. Of these but 3 were reported on the schedules as operating in 1941. There were added in the survey 21 who were not licensed in 1935.

Table 19. Number of Dairy Farms and Milk Cattle and Per cent of Each by Market Outlet, Miami County

| Township | Total Number of Farms | Total Number of Milk Cattle | For Fluid Consumption | | Fluid for Manufacture | | Butterfat | | Not Classified | |
|--------------|--------------------------------|--------------------------------------|--------------------------|--------|--------------------------|--------|-----------|--------|-------------------|--------|
| | | | Farm | Cattle | Farm | Cattle | Farm | Cattle | Farm | Cattle |
| | | | pct. | pct. | pct. | pct. | pct. | pct. | pct. | pct. |
| Bethel | 148 | 1805 | 29.1 | 44.4 | 12.8 | 13.7 | 53.4 | 39.6 | 4.7 | 2.3 |
| Brown | 135 | 1419 | 24.5 | 31.7 | 45.9 | 47.6 | 29.6 | 20.7 | 0.0 | 0.0 |
| Concord | 207 | 2190 | 19.3 | 28.7 | 58.5 | 57.6 | 16.9 | 11.3 | 5.3 | 2.4 |
| Eliabeth | 122 | 1518 | 23.8 | 35.1 | 44.3 | 40.4 | 25.4 | 20.4 | 6.5 | 4.1 |
| Lost Creek | 111 | 1354 | 16.2 | 20.8 | 25.2 | 26.6 | 55.0 | 50.2 | 3.6 | 2.4 |
| Monroe | 145 | 1667 | 57.9 | 71.8 | 18.6 | 16.0 | 15.9 | 9.8 | 7.6 | 2.4 |
| Newberry | 268 | 2658 | 48.9 | 55.6 | 36.9 | 31.7 | 10.1 | 10.0 | 4.1 | 2.7 |
| Newton | 312 | 2898 | 29.2 | 39.2 | 47.1 | 48.3 | 16.0 | 9.5 | 7.7 | 3.0 |
| Spring Creek | 97 | 1081 | 23.7 | 32.2 | 44.4 | 41.6 | 30.9 | 25.5 | 1.0 | 0.7 |
| Staunton | 129 | 1751 | 23.3 | 31.3 | 36.4 | 33.5 | 34.1 | 32.3 | 6.2 | 2.9 |
| Union | 246 | 2049 | 54.1 | 60.8 | 16.2 | 15.9 | 25.2 | 19.1 | 4.5 | 4.2 |
| Washington | 118 | 1337 | 51.7 | 61.3 | 24.6 | 22.0 | 17.8 | 13.8 | 5.9 | 2.9 |
| County | 2038 | 21727 | 35.1 | 43.6 | 35.1 | 33.7 | 24.7 | 20.1 | 5.1 | 2.6 |

Montgomery County

Montgomery County ranked next to Hamilton County as to concentration of population in the area. The influence of the city of Dayton upon the market outlets of the farms was not as pronounced here as in the case of Cincinnati and Hamilton County.

The milk from only 54% of the cows in Montgomery County went to fluid consumption whereas in Hamilton County the percentage was 75. Butterfat was relatively important. It was the outlet for 31% of the farms and 25% of the cows. Only 2 townships, Clay and Perry, sold milk from more than 40% of the farms to manufacturing plants.

This county, like Butler and Hamilton showed an increase in farms between 1930 and 1940. The census figure for 1930 was 3692 and for 1940 it was 4163, an increase of 471 farms. A considerable acreage in this county in 1941 was under Federal control in Wright and Patterson Air Fields.

In sanitary control the county and the city of Dayton operated separately with the exception of one plant which they inspected in conjunction.

The standard ordinance has been under consideration by the Dayton Board of Health for two years. New installations are made in accordance with it. New shippers are required to conform with the exception of 2 compartment wash and rinse vats.

The limiting factor in advancing toward adoption of the standard ordinance was the ability on the part of the farmers to obtain materials and labor for required building alterations. Cases were reported in the summer of 1941 of shippers having waited two months on materials. It was almost impossible to hire qualified labor for the work.

Milk Distributors

| | |
|--------------------------------|-----------------------------|
| Finch Jersey Farm | Dayton |
| Borden's Dairy Products | 219 S. 5th St., Dayton |
| Elm Hill Farm | Dayton |
| Fairview Dairy | Dayton |
| McCloskey Bros. Dairy | New Troy Pike, Dayton |
| Shoemaker Guernsey Farms, Inc. | Dayton |
| The Kroger Groc. & Baking Co. | Dayton |
| Ted Dinkelberger | Dixie Highway, Miamisburg |
| P. D. Cosmos | 1163 W. 3d St., Dayton |
| Equity Stores, Inc. | 1930 No. Main, Dayton |
| Neals Farms Dairy Products | 865 Patterson Blvd., Dayton |
| Eshbaugh Ideal Dairy | Miamisburg |
| Blossom Hill Dairy | 6104 W. 3d, Dayton |
| Funkhouser's Dairy | 44 Lowes St., Dayton |
| Grocers Coop. Dairy, Inc. | 723 N. Main, Dayton |
| Hildebrands Dairy | 1314 Lamar St., Dayton |
| Himes Bros. Dairy Co. | 1537 Germantown St., Dayton |
| Molers Belmont Dairy Co. | 3230 Smithville Rd., Dayton |
| Webster C. Molen | Wagner Road, Dayton |
| Newbauer's Sanitary Milk Co. | 1201 E. Herman Ave., Dayton |
| Royal Crest Guernsey Farm | 4603 Salem, Dayton |
| White Clover Dairy Farms, Inc. | 1742 E. 1st St., Dayton |
| Geo. A. Schell's Dairy | Germantown |
| Maple Grove Dairy | R. #5, Dayton |

Manufacturing Plants

| | |
|---|-----------|
| Red Wing Corp. (Borden Company) 748 S. Main St., Dayton | Ice Cream |
| Miami Valley Co. Milk Prod., 136 W. Maple, Dayton | Butter |
| Gem City Ice Cream Co., 1005 W. 3d, Dayton | Ice Cream |
| Purity Ice Cream Co., 260 Proctor Street, Dayton | Ice Cream |
| Brookville Home Dairy, Brookville | Butter |

In contrast with Hamilton County, Montgomery County appeared to have declined in the number of farms selling direct to consumers. In 1935 there were 72 producer-distributors licensed by the Ohio Milk Marketing Commission. Only 6 of these were recorded as in business in 1942 and in addition 43 farms were listed in the survey that were not under license in 1935.

Table 20. Number of Dairy Farms and Milk Cattle and Per cent of Each
by Market Outlet, Montgomery County

| Township | Total Number of Farms | Total Number of Milk Cattle | For Fluid | | Fluid for | | Butterfat | | Not | |
|------------|--------------------------------|--------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|------------|-------------|
| | | | Consumption | Farm Cattle | Manufacture | Farm Cattle | Farm Cattle | Farm Cattle | Classified | Farm Cattle |
| | | | pct. | pct. | pct. | pct. | pct. | pct. | pct. | pct. |
| Butler | 147 | 1398 | 36.0 | 48.5 | 15.0 | 14.5 | 42.2 | 33.7 | 6.8 | 3.3 |
| Clay | 207 | 1667 | 24.2 | 25.4 | 47.8 | 47.9 | 28.0 | 26.7 | 0.0 | 0.0 |
| German | 161 | 1309 | 32.9 | 47.4 | 21.8 | 20.3 | 38.5 | 27.6 | 6.8 | 4.7 |
| Harrison | 39 | 418 | 59.0 | 83.0 | 0.0 | 0.0 | 15.4 | 7.4 | 25.6 | 9.6 |
| Jackson | 165 | 1448 | 43.1 | 53.2 | 21.8 | 18.6 | 32.7 | 26.8 | 2.4 | 1.4 |
| Jefferson | 181 | 1273 | 51.9 | 58.9 | 11.6 | 12.5 | 36.5 | 28.6 | 0.0 | 0.0 |
| Madison | 166 | 1726 | 69.9 | 76.2 | 5.4 | 5.7 | 18.7 | 14.3 | 6.0 | 3.8 |
| Mad River | 36 | 498 | 72.2 | 77.3 | 0.0 | 0.0 | 19.5 | 16.7 | 8.3 | 6.0 |
| Miami | 146 | 1124 | 48.6 | 58.7 | 14.4 | 13.6 | 28.8 | 21.3 | 8.2 | 6.4 |
| Perry | 213 | 1873 | 21.6 | 24.2 | 44.1 | 42.6 | 34.3 | 33.2 | 0.0 | 0.0 |
| Randolph | 156 | 1700 | 53.2 | 56.5 | 19.9 | 19.6 | 22.4 | 22.3 | 4.5 | 1.6 |
| Van Buren | 32 | 431 | 71.9 | 88.6 | 0.0 | 0.0 | 15.6 | 7.2 | 12.5 | 4.2 |
| Washington | 113 | 1053 | 50.5 | 63.8 | 0.0 | 0.0 | 39.8 | 31.8 | 9.7 | 4.4 |
| Wayne | 98 | 1094 | 65.3 | 77.8 | 0.0 | 0.0 | 28.6 | 18.7 | 6.1 | 3.5 |
| County | 1860 | 17012 | 44.6 | 54.5 | 19.8 | 18.1 | 30.9 | 24.7 | 4.7 | 2.7 |

Preble County

The milk from the county was almost equally divided among the three outlets. Only one-fourth of the producers sold through fluid use channels, but they had one-third of the cows. In four townships the fluid use was the dominating outlet, in 5 manufacturing use and in 3 butterfat was the most widely used outlet. This county is on the edge of a heavy manufacturing area on one side and a fluid milk area on the other side.

The county was operating under a local code that included all towns. A full time sanitarian was employed.

Milk Distributors and Manufacturing Plants included:

Milk Distributors

Christmans Dairy, Eaton
Kautz's Dairy, Eaton

Druley Dairy, Eaton
Alexandria Dairy, W. Alexandria
C. C. Sittloh, Lewisburg

Several dairies in Richmond, Indiana, Hamilton and Dayton sell some milk to consumers in Preble County

Manufacturing Plants

Eldorado Creamery

Eldorado

Butter

There were 42 producer-distributors under license in 1935. Of these 10 were reported as in business in 1941. Eleven more were listed as selling direct to consumers in the survey.

Table 21. Number of Dairy Farms and Milk Cattle and Per cent of Each
by Market Outlet, Preble County

| Township | Total Number of Farms | Total Number of Milk Cattle | For Fluid Consumption | | Fluid for Manufacture | | Butterfat | | Not Classified | |
|------------|--------------------------------|--------------------------------------|--------------------------|------|--------------------------|------|-------------|------|-------------------|------|
| | | | Farm Cattle | pct. | Farm Cattle | pct. | Farm Cattle | pct. | Farm Cattle | pct. |
| Dixon | 105 | 966 | 28.6 | 38.9 | 36.2 | 35.4 | 27.6 | 21.6 | 7.6 | 4.1 |
| Gasper | 95 | 878 | 20.0 | 30.9 | 27.4 | 22.3 | 52.6 | 46.8 | 0.0 | 0.0 |
| Gratis | 173 | 1436 | 30.6 | 38.3 | 19.1 | 18.3 | 50.3 | 43.4 | 0.0 | 0.0 |
| Harrison | 224 | 1825 | 15.6 | 25.9 | 41.1 | 38.7 | 38.8 | 32.8 | 4.5 | 2.6 |
| Israel | 116 | 1195 | 24.1 | 32.6 | 27.6 | 23.2 | 47.4 | 43.4 | 0.9 | 0.8 |
| Jackson | 122 | 1215 | 23.7 | 32.3 | 57.4 | 55.0 | 11.5 | 8.3 | 7.4 | 4.4 |
| Jefferson | 135 | 1308 | 8.2 | 11.5 | 57.0 | 61.2 | 34.8 | 27.3 | 0.0 | 0.0 |
| Lanier | 139 | 1308 | 31.7 | 40.3 | 30.2 | 32.9 | 30.2 | 22.4 | 7.9 | 4.4 |
| Monroe | 198 | 1833 | 16.2 | 24.4 | 47.5 | 42.5 | 33.8 | 30.8 | 2.5 | 2.3 |
| Sommers | 133 | 1433 | 41.4 | 52.7 | 7.6 | 5.6 | 51.1 | 42.0 | 0.0 | 0.0 |
| Twin | 190 | 1813 | 32.1 | 43.3 | 28.9 | 27.8 | 33.2 | 25.1 | 5.8 | 3.8 |
| Washington | 223 | 1941 | 26.0 | 32.8 | 34.5 | 37.0 | 33.2 | 26.7 | 6.3 | 3.5 |
| County | 1853 | 17151 | 24.5 | 33.5 | 34.9 | 33.6 | 36.9 | 30.6 | 3.7 | 2.3 |

Warren County

The milk from three-fourths of the cows of this county is sold for use in fluid consumption. Only four townships sell over 10 % of their production through manufacturing outlets and three townships sell over 20% as butterfat. The county ranks second in the district in percent going for fluid use and also second in number of cows from which milk is sold in this way.

No milk regulations were in effect in this county at the time of the survey.

Milk Distributors

Arthur E. Sibcy, Lebanon

Stokes Dairy Co., Lebanon

There were no manufacturing plants listed for this county.

In 1935 there were 49 producer-distributors licensed under the Burke Act. Of these 8 were reported as such in the survey. The survey also recorded 27 that were not under license in 1935, making a total of 35 in 1941.

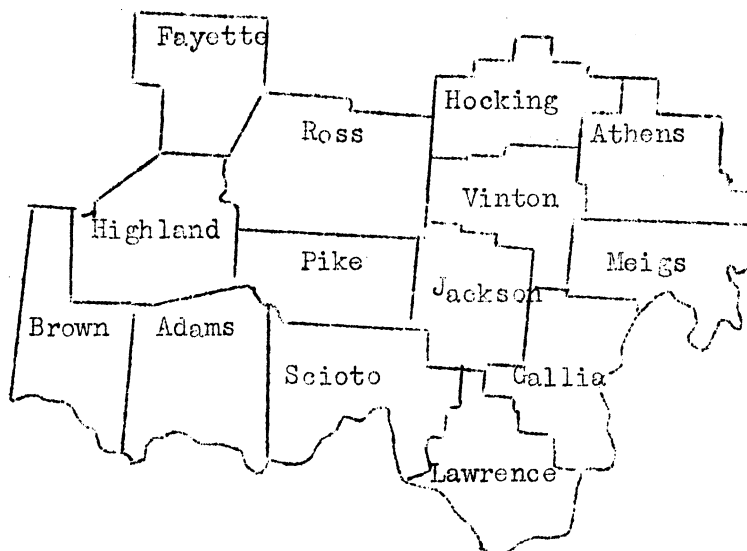
Table 22. Number of Dairy Farms and Milk Cattle and Per cent of Each
by Market Outlet, Warren County

| Township | Total Number of Farms | Total Number of Milk Cattle | For Fluid Consumption | | Fluid for Manufacture | | Butterfat | | Not Classified | |
|-------------|--------------------------------|--------------------------------------|--------------------------|------|--------------------------|------|-------------|------|-------------------|------|
| | | | Farm Cattle | pct. | Farm Cattle | pct. | Farm Cattle | pct. | Farm Cattle | pct. |
| Clear Creek | 195 | 1642 | 53.3 | 64.4 | 14.9 | 14.4 | 24.6 | 17.5 | 7.2 | 3.7 |
| Deerfield | 102 | 1089 | 80.4 | 89.1 | 1.9 | 1.7 | 6.9 | 3.4 | 10.8 | 5.8 |
| Franklin | 153 | 1341 | 62.7 | 75.6 | 1.3 | .7 | 31.4 | 22.1 | 4.6 | 1.6 |
| Hamilton | 116 | 1143 | 63.8 | 78.3 | 4.3 | 3.6 | 25.9 | 15.6 | 6.0 | 2.5 |
| Harlan | 155 | 1832 | 58.7 | 72.5 | 17.4 | 12.3 | 18.7 | 13.1 | 5.2 | 2.1 |
| Massie | 82 | 811 | 45.1 | 56.1 | 0.0 | 0.0 | 51.2 | 41.2 | 3.7 | 2.7 |
| Salem | 80 | 1142 | 76.2 | 88.7 | 3.8 | 2.4 | 8.8 | 3.7 | 11.2 | 5.2 |
| Turtlecreek | 242 | 2965 | 78.9 | 87.8 | 5.4 | 3.3 | 12.0 | 7.0 | 3.7 | 1.9 |
| Union | 86 | 868 | 67.5 | 81.0 | 0.0 | 0.0 | 24.4 | 15.7 | 8.1 | 3.3 |
| Washington | 112 | 1224 | 51.8 | 62.7 | 17.0 | 16.0 | 23.2 | 17.3 | 8.0 | 4.0 |
| Wayne | 144 | 1409 | 45.8 | 54.4 | 15.3 | 15.3 | 34.0 | 25.5 | 4.9 | 4.8 |
| County | 1467 | 15466 | 62.6 | 74.8 | 8.3 | 6.9 | 22.9 | 15.1 | 6.2 | 3.2 |

FARM SALES OF OHIO MILK THROUGH DIFFERENT OUTLETS

V. South Central Ohio Area: Adams, Athens, Brown, Fayette, Gallia,
Highland, Hocking, Jackson, Lawrence, Meigs, Pike,
Ross, Scioto and Vinton Counties

C. G. McBride
and
R. W. Sherman



Department of Rural Economics
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and
Ohio Agricultural Experiment Station

Columbus, Ohio
May, 1942

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Farm Sales of Ohio Milk Through Different Outlets

Part V

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Highland, Hocking, Jackson, Lawrence, Meigs, Pike,
Ross, Scioto and Vinton Counties

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FARM SALES OF MILK THROUGH DIFFERENT OUTLETS

V. South Central Ohio Area: Adams, Athens, Brown, Fayette, Gallia,
Highland, Hocking, Jackson, Lawrence, Meigs, Pike,
Ross, Scioto and Vinton Counties^{/1}

by

C. G. McBride and R. W. Sherman

Sources of Data

This study, the fifth of a series, is based upon a survey of all farms with three or more dairy cattle at the time of the last test for tuberculosis conducted by the U.S. Bureau of Animal Industry and the Ohio Department of Agriculture. The records were obtained through the cooperation of these authorities and agricultural extension agents in charge of the records in the counties.

A list of herd owners was arranged by townships. Several copies of each list were made and these were mailed to a carefully selected group of key men, well distributed in each township. Each recipient of a list was asked to check the disposition of milk from each farm on which he had this information. When a producer was selling both to a city milk dealer and to a manufacturing outlet, he was recorded in the city milk dealer outlet.

When the checked sheets were returned the reports for each township were combined and in most cases it was found that a practically complete record had been obtained. In a few townships, the returns were not full enough to constitute a satisfactory record and other contacts were made in these townships in order to complete the data. A very high percentage of those who received lists cooperated by returning them promptly. Without this generous response on the part of those who were asked to assist, this survey would not have been possible. The cost in time and money of personal visitation to every township would have been prohibitive.

Limitations of the Study

Some difficulties were encountered in obtaining the information from the testing records. Some herds designated as mixed breeds undoubtedly were in whole or part beef cattle, but there was no way to determine the exact numbers. In areas surrounding the cities, there were many farms with 3 or 4 cattle tested. Replies indicated that many of these were kept primarily for home use but in some cases a small amount of milk or butterfat might be sold at certain times. Those who reported often lacked accurate information as to disposal of dairy products on such farms.

Some farmers had moved out of the township between the time of the test and the survey, but this factor was in large measure adjusted by the addition of new names

^{/1} Area I comprised Delaware, Fairfield, Franklin, Licking, Madison, Pickaway and Union Counties. Area II, Carroll, Columbiana, Holmes, Medina, Portage, Stark Summit, Tuscarawas and Wayne Counties. Area III, Defiance, Fulton, Hancock, Henry, Lucas, Ottawa, Paulding, Putnam, Sandusky, Seneca, Williams and Wood Counties. Area IV, Butler, Champaign, Clark, Clermont, Clinton, Darke, Greene, Hamilton, Miami, Montgomery, Preble and Warren Counties.

by those reporting. In a very few cases, where all attempts to obtain a complete record left too large a percentage of farms unclassified, some adjustments were made, based on the records of adjacent townships with approximately the same conditions. Despite the limitations described above, it is believed that the study presents a dependable picture of the disposal of milk from the farms of the area.

Type of Farming

This 14 county area is one of low crop production with the exception of Fayette, Highland, and Ross Counties. The hay production for 1939 for the entire area was just about half as much per county as for the state as a whole; corn production was about 60% as much per county as for the state and of the corn production for the 14 counties, over 60% was in the three counties mentioned above. This area, as a whole, does not produce its dairy feed requirements. In the Land Use study of Lawrence County, it was found that, even with a very low livestock population, the production of feed crops was only about 75% of requirements. This deficit condition holds foremost of the other counties in varying degrees.

In Table 1 is given the four most important sources of cash farm income for each of the 14 counties. The two most important sources are sales of meat animals and dairy products. In the area as a whole the total cash income from sale of meat animals is the greater. That from hogs alone is a fraction of one percent higher than that from dairy products. This is due to the heavy sale of hogs in Fayette, Ross and Highland Counties. On a county basis the advantage shifts to dairy products. They rank first in 9 counties, second in 3 counties and third in the remaining two.

Some consideration has recently been given to a marketing program involving the 9 counties Athens, Gallia, Jackson, Lawrence, Meigs, Pike, Ross, Scioto and Vinton. In this group income from dairy products is first except in Lawrence where fruit is high and Ross where hogs take top rank.

Table 1. Important Sources and Percentage of Total Cash Farm Income Contributed by, and Rank of Each
14 Southern Ohio Counties, 1934 - 1938 Average*

| County | Total Cash Farm Income | Rank of Sources of Income and Their Relative Importance. | | | | | | | |
|----------|------------------------|--|---------------|----------------|---------------|---------------|---------------|----------------|---------------|
| | | Pct. of First | Pct. of Total | Pct. of Second | Pct. of Total | Pct. of Third | Pct. of Total | Pct. of Fourth | Pct. of Total |
| Adams | \$ 2,041,000 | DAIRY | 25 | Tobacco | 22 | Poultry | 20 | Hogs | 12 |
| Athens | 1,371,000 | DAIRY | 43 | Poultry | 19 | Cattle | 11 | Sheep | 8 |
| Brown | 2,775,000 | Tobacco | 25 | DAIRY | 23 | Poultry | 18 | Hogs | 18 |
| Fayette | 4,308,000 | Hogs | 51 | Wheat | 11 | DAIRY | 9 | Cattle | 6 |
| Gallia | 1,522,000 | DAIRY | 31 | Poultry | 26 | Tobacco | 10 | Cattle | 9 |
| Highland | 3,687,000 | Hogs | 36 | DAIRY | 19 | Poultry | 17 | Wheat | 6 |
| Hocking | 790,000 | DAIRY | 30 | Poultry | 17 | Hogs | 14 | Cattle | 11 |
| Jackson | 863,000 | DAIRY | 30 | Poultry | 26 | Cattle | 13 | Fruit | 12 |
| Lawrence | 1,332,000 | Fruit | 35 | DAIRY | 25 | Poultry | 13 | Cattle | 11 |
| Meigs | 1,289,000 | DAIRY | 33 | Poultry | 28 | Cattle | 8 | Fruit | 7 |
| Pike | 1,071,000 | DAIRY | 23 | Poultry | 20 | Hogs | 17 | Corn | 4 |
| Ross | 4,174,000 | Hogs | 29 | Wheat | 13 | DAIRY | 13 | Cattle | 12 |
| Scioto | 1,570,000 | DAIRY | 36 | Poultry | 14 | Wheat | 10 | Fruit | 9 |
| Vinton | 532,000 | DAIRY | 33 | Poultry | 24 | Cattle | 12 | Hogs | 8 |
| Total | 27,325,000 | Hogs | 22 | DAIRY | 22 | Poultry | 15 | Cattle | 7 |

* Derived from estimates of Gross Farm Cash Income as published by Dept. of Rural Economics of Ohio State University and Ohio Agricultural Experiment Station, 1934 - 1938

Roads

Movement of milk and cream into different market outlets is influenced to a great extent by the type of highway available. The only means of transportation used in marketing milk and cream in this area in 1941 was the motor truck.

The public road mileage of these 14 counties as of January 1, 1941 classified into hard surface, gravel and earth, is given in Table 2. Compared with the other areas studied, this area has the highest percentage of earth road mileage, 4140 miles or 30 per cent in the total of 13,920 miles. The Dayton-Cincinnati area had 3 per cent of earth roads. The percentage of gravel roads is relatively high in this area. This, however, has little influence upon the movement of milk to market since gravel as well as hard surface roads are usable for milk trucks every day in the year.

Table 2. Public Road Mileage of the Area by Types and by Counties
as of January 1, 1941

| County | Hard Surface | | Gravel | | Earth | | Total |
|----------|--------------|------|---------|------|---------|------|----------|
| | Miles | Pct. | Miles | Pct. | Miles | Pct. | Miles |
| Adams | 112.04 | 9.5 | 934.56 | 79.0 | 136.60 | 11.5 | 1183.20 |
| Athens | 195.55 | 17.8 | 608.80 | 55.3 | 295.50 | 26.9 | 1099.85 |
| Brown | 117.77 | 11.5 | 405.10 | 39.4 | 504.54 | 49.1 | 1027.41 |
| Fayette | 142.83 | 22.0 | 502.25 | 77.3 | 4.80 | 0.7 | 649.88 |
| Gallia | 49.86 | 4.9 | 524.24 | 52.0 | 434.05 | 43.1 | 1008.15 |
| Highland | 316.11 | 29.8 | 688.80 | 65.0 | 55.60 | 5.2 | 1060.51 |
| Hocking | 80.37 | 8.6 | 345.00 | 33.2 | 605.59 | 58.2 | 1039.96 |
| Jackson | 67.84 | 8.4 | 384.07 | 47.6 | 354.85 | 44.0 | 806.76 |
| Lawrence | 38.31 | 3.8 | 591.17 | 59.6 | 363.00 | 36.6 | 992.48 |
| Meigs | 67.00 | 6.6 | 522.60 | 51.6 | 423.00 | 41.8 | 1012.60 |
| Pike | 97.76 | 10.0 | 415.53 | 42.6 | 463.30 | 47.4 | 976.49 |
| Ross | 60.86 | 5.4 | 931.75 | 82.9 | 131.00 | 11.7 | 1123.61 |
| Scioto | 76.30 | 7.0 | 957.90 | 88.3 | 50.50 | 4.7 | 1084.70 |
| Vinton | 39.60 | 4.6 | 496.47 | 58.1 | 318.30 | 37.3 | 854.37 |
| Total | 1,471.20 | 10.6 | 8308.14 | 59.7 | 4140.63 | 29.7 | 13919.97 |

Comparison of Study Data with Census and Crop and Livestock Reports

The United States Census and the Federal-State Cooperative Crop and Livestock Reporting Service have a listing of milk cattle as "cows and heifers, 2 years old and over". This classification can be used to compare with the data collected for this study as shown in Table 3.

For the four previous areas factors were used to convert the number of cattle tested in the last tuberculosis test to number of milk cows. This was done by taking several hundred farms for which records were available both for number of milk cattle tested for tuberculosis and actual number of milk cows in the herds. This percentage relation was applied for all herds in the area as an estimate of the number of milk cows on the farms included in the study. In this area such procedure would not have been reliable because there was so much difference in type of farming and relation between milk cows and total number of cattle in the herd. Any conversion factor applicable to one county likely would not fit others. Rather than attempt to set up such a "milk cow" figure the data have been left in the original form.

In Table 3 the number of cattle per farm is more than double the number of milk cows per farm according to the Census. This discrepancy is greater than in most of the other areas since most farms in this area have mixed herds. Very few have herds made up strictly of dairy cattle.

It will be seen in Table 3 that the number of milk cows per farm was only 3.6 while for the state it was 5.3. This accounts for the fact that in some townships there was a fairly large number of farms not checked as to outlet. No doubt most of those not checked were of no market importance.

Table 3. Number of Cows and Heifers, 2 Years Old and Over, Number of Cows per Farm According to 1940 Census, and All Cattle per Farm in Study, by County

| County | Milk cows and heifers 2 years old & over Crop & Livestock esti- mates, Jan. 1, 1940 | Cows per farm 1940 Census* | All cattle per farm in study |
|-------------|--|----------------------------------|------------------------------------|
| Adams | 8,300 | 3.6 | 7.4 |
| Athens | 9,200 | 4.8 | 10.7 |
| Brown | 10,600 | 3.8 | 8.0 |
| Fayette | 5,600 | 3.9 | 8.4 |
| Gallia | 8,000 | 3.5 | 8.1 |
| Highland | 12,800 | 4.8 | 8.0 |
| Hocking | 4,000 | 3.5 | 8.0 |
| Jackson | 4,700 | 3.5 | 10.0 |
| Lawrence | 5,700 | 2.6 | 7.6 |
| Meigs | 6,900 | 3.3 | 8.2 |
| Pike | 4,300 | 3.1 | 7.5 |
| Ross | 8,500 | 3.9 | 9.7 |
| Scioto | 7,700 | 3.1 | 10.8 |
| Vinton | 3,100 | 3.0 | 7.7 |
| 14 Counties | 99,400 | 3.6 | 8.7 |
| State | 1,043,000 | 5.3 | xxx |

* Cows and heifers 2 years old and over kept mainly for milk production, 1939

In Table 4 is listed the number of farms selling whole milk and butterfat for 1939, according to the 1940 Census. Of milk disposed of in 1939 in the form of fluid milk or butterfat in the area, approximately 56% was sold in fluid form and 44% as butterfat. Since 1929 there has been an increase of 943 farms selling whole milk according to the Census. In the same time there was a decrease of 2709 farms selling butterfat. In 1929 there were but 395 farms selling whole milk in Highland County while in 1939 this had increased to 1227 accompanied by a fall of about 1000 farms selling butterfat. Most of this change represented milk going to condenseries. This one county accounted for most of the net increase in number of farms selling whole milk in 1939 over 1929 for the 14 county area.

There was a slight difference in the number of farms selling whole milk as reported by the Census and by this study. This difference can be attributed to two factors. First, the Census was for the year 1939 while the study data was for the latter part of 1941 and the first part of 1942. Second, the study excluded farms with one and two cows. Brown County showed the most discrepancy where this study disclosed 252 more farms selling whole milk than reported by the Census. This was a reflection of the increasing importance of fluid manufacturing outlets in this area.

The sale of whole milk per farm in Gallia and Scioto Counties was double that of most of the other counties of the area. The sales of butterfat per farm varied much less among counties than did that for whole milk.

Table 4. Sales of Whole Milk and Butterfat and Number of Farms Reporting Each, by County, 1939

| County | Farms report- ing whole milk sold (number) | Annual sales of whole milk per farm reporting (gallons) | Farms report- ing cream sold as butterfat (number) | Annual sales of butterfat per farm (pounds) |
|-------------|---|--|---|--|
| Adams | 293 | 1,747 | 1,468 | 383 |
| Athens | 471 | 3,906 | 717 | 439 |
| Brown | 465 | 2,205 | 1,854 | 336 |
| Fayette | 413 | 2,222 | 567 | 374 |
| Gallia | 136 | 6,506 | 1,121 | 267 |
| Highland | 1,227 | 2,513 | 914 | 426 |
| Hocking | 128 | 2,764 | 518 | 292 |
| Jackson | 124 | 3,497 | 443 | 382 |
| Lawrence | 223 | 2,940 | 599 | 269 |
| Meigs | 189 | 2,861 | 1,109 | 312 |
| Pike | 134 | 3,199 | 556 | 247 |
| Ross | 374 | 3,892 | 790 | 342 |
| Scioto | 285 | 5,782 | 592 | 337 |
| Vinton | 74 | 1,638 | 473 | 305 |
| 14 Counties | 4,536 | 3,064 | 11,721 | 339 |

Source: 1940 Census of Agriculture, First Series, Ohio

This area had a small increase in population when compared to the first four areas of the study. The population of 10 of the counties went down from 1900 to 1940. The most notable increase in population occurred in Scioto and Ross Counties. While the population was increasing by 8% for the area the number of dairy cows increased 18% with a resultant rise in cows per 100 population from 19.4 to 21.2. For the area as a whole this meant about three times as many cows as necessary to supply milk for fluid consumption if all production was available for such use.

Table 5. Number of Dairy Cows Compared with Total Population in Counties of the Area, 1900 and 1940

| County | 1900 | | | 1940 | | |
|----------|----------------|---------------------|----------------------------|----------------|---------------------|----------------------------|
| | Dairy Cows* | Total Population | Cows per 100 Population | Dairy Cows* | Total Population | Cows per 100 Population |
| Adams | 6,078 | 26,328 | 23.1 | 7,938 | 21,705 | 36.6 |
| Athens | 6,586 | 38,730 | 17.0 | 8,936 | 46,166 | 19.4 |
| Brown | 7,715 | 28,237 | 27.3 | 10,173 | 21,638 | 47.0 |
| Fayette | 5,044 | 21,725 | 23.2 | 5,249 | 21,385 | 24.5 |
| Gallia | 6,730 | 27,918 | 24.1 | 7,676 | 24,930 | 30.8 |
| Highland | 7,917 | 30,982 | 25.6 | 12,308 | 27,099 | 45.4 |
| Hocking | 4,892 | 24,398 | 20.1 | 3,777 | 21,504 | 17.6 |
| Jackson | 4,866 | 34,248 | 14.2 | 4,469 | 27,004 | 16.5 |
| Lawrence | 5,550 | 39,534 | 14.0 | 5,427 | 46,705 | 11.6 |
| Meigs | 6,138 | 28,620 | 21.4 | 6,610 | 24,104 | 27.4 |
| Pike | 3,209 | 18,172 | 17.7 | 4,154 | 16,113 | 25.8 |
| Ross | 6,855 | 40,940 | 16.7 | 8,090 | 52,147 | 15.5 |
| Scioto | 5,186 | 40,981 | 12.7 | 7,521 | 86,565 | 8.7 |
| Vinton | 3,895 | 15,330 | 25.4 | 2,877 | 11,573 | 24.9 |
| Total | 80,661 | 416,143 | 19.4 | 95,205 | 448,638 | 21.2 |

Source: U.S. Census of Population and of Agriculture, 1900 and 1940

* Cows and heifers 2 years old and over kept mainly for milk production, 1939

Changes in Market Outlets, 1903 to 1942

One of the first records of a systematic survey of outlets for milk and butterfat from Ohio farms is found in the annual report of the Ohio Dairymen's Association for 1903.^{/1} Professor J. W. Decker of Ohio State University compiled this directory of butter and cheese factories and milk skimming and shipping stations. The totals for the state were: butter factories, 148; skimming stations, 77; milk shipping stations, 22; American cheese factories, 114; Swiss cheese factories, 92. The report did not include milk distributors who purchased from farmers nor producer-distributors who sold milk at retail.

The 14 counties of this area had, in 1903, only a single creamery or butter factory. This was located at Lynchburg in Highland County. There is a sharp contrast between this area and that of the Akron-Canton Area.^{/2} In the 9 counties of that area there were, in 1903, a total of 128 dairy plants.

A survey of sources of market milk and butterfat in Ohio was made in 1931 by McBride and Cowden.^{/3} This survey gave the locations of manufacturing plants. In this survey not a single manufacturing plant was found in the 14 counties engaged in production of evaporated milk. Washington Court House was the only place listed as an important churning point. In 1931 there were two counties in the area in which there were a few farms under Cincinnati milk inspection. They were Brown with 62 and Highland with 49 farms.

By the time of the 1942 survey the plants receiving whole milk for manufacturing had increased. Carnation Milk Company had a plant at Hillsboro and M & R Dietetics Laboratories received milk in large quantities at Chillicothe for processing in Columbus. The Cudahy Company at Washington C.H. and the Farmers Equity Union Creamery Company at Sardinia were the largest manufacturers of butter.

Cooperative Marketing by Producers

Several small cooperative milk marketing associations serve the fluid markets in the area. The Scioto County Cooperative Milk Producers Association sells to the dealers serving Portsmouth and other towns in Scioto County. The Athens Milk Sales Association serves Athens. Some of the milk is resold into West Virginia markets. The Huntington Interstate Milk Producers Association has some Ohio dealers as buyers. Approximately 75% of its membership is in Meigs, Gallia, Jackson, Lawrence and Scioto Counties. The Association sells to dealers in Gallipolis and some Huntington dealers distribute in Ironton. Ross County Cooperative Milk Producers Association serves Chillicothe dealers.

The Fayette County Farm Bureau and the Gallia County Cooperative Dairy Sales Association assemble and market sour cream as cooperatives. The Farmers Equity Union is the only cooperative engaged in manufacturing.

Status of Sanitary Controls

This area has had a peculiar history as to sanitary regulations. Much milk for fresh fluid consumption has moved from some counties of the area into West Virginia

^{/1} Reprint Annual Report Ohio Dairymen's Association, 1903, J. W. Decker

^{/2} Dept. Rural Economics, Mimeograph Bulletin No. 131, Part II

^{/3} Ohio Agricultural Experiment Station Bulletin #523, Sources of Market Milk and Butterfat in Ohio, C. G. McBride and T. K. Cowden, 1933

and Kentucky markets. These states were operating under the U.S. Public Health Service standard milk ordinance and farms going into these markets were compelled to meet these requirements. This applied especially to Athens, Gallia, Meigs and part of Jackson Counties. Much of the inspection and supervision needed to qualify them was done by H. J. Swaim of the Ohio Department of Agriculture.

A condition of inadequate water supply for proper cooling in the hot weather of midsummer has resulted in an unusually large number of farms having electric refrigeration for milk cooling. The local city and village consumers served by the dealers whose farms were qualified for out of state shipment, obviously got the benefit of these rigid sanitary requirements.

The farms going to the M. C. R. Dietetics Laboratories at Columbus were also under control of out of state inspection. Some of this product moved into eastern markets and was required to meet the inspection of New Jersey.

The new ordinance plant at Point Pleasant was creating some new problems in sanitary controls.

The U.S. Public Health service ordinance had been adopted by but a few health districts in this area as will be shown in the following section of individual county analysis.

Summary of Study by Counties and Townships

The material included in this section is a compilation of the information furnished by those who assisted in the mail survey supplemented by some additional data obtained in personal visits to the counties. Tables 6 to 8 and Figures 1 to 4 summarize the material for the district by counties. A discussion of each county with township analyses follows. Since no conversion factor was used for the area the maps are made up on the basis of "milk cattle" rather than "milk cows" as in the areas previously summarized.

Table 6 summarizes the distribution of farms and cattle among the market outlets and Table 7 shows the percentage distribution of these farms and cattle by market outlet. In Table 8 is given the number of cattle per farm by market outlet.

Milk sold by producer-distributors belongs in the same outlet classification as milk sold to dealers for fresh fluid consumption. In the county tables they are combined. To find the number of farms and cattle involved in supplying consumers with fresh milk it is necessary in all instances to combine the "Producer-Distributor" figures with those of "Fluid to Distributor". The total number of farms in this classification is 1510 or 10.6 per cent. These 1510 farms, however, have 20.7 per cent of the milk cattle because the larger dairy farms seek the city market outlets. The farms selling butterfat rank lowest in average number of cattle per farm.

Among the counties the variation in percent of dairy farms selling milk for fluid consumption is from 2.7 percent for Adams County to 21.7 per cent for Scioto County. In the case of percent of milk cattle on farms selling milk for fluid consumption, Adams County was low with 6.5 per cent and Scioto was high with 47.8 per cent.

The Figures 1 to 4 show the concentration of milk cattle in the district. Figure 1 includes all cattle in herds with 3 or more dairy cattle. Figure 2 brings out the comparative unimportance of milk for fluid consumption in most of the counties. Figure 3 shows the location of the cattle from which milk is sold for manufacturing use and Figure 4 shows the widespread distribution of cattle from which butterfat is sold.

Table 6. Number of Dairy Farms and Number of Milk Cattle by Market
Outlet 14 Southern Ohio Counties

| County | Producer Distributor | | Fluid to Distributor | | Fluid for Manufacture | | Butterfat | | Not Classified | | Total | |
|----------|-------------------------|--------|-------------------------|--------|--------------------------|--------|-----------|--------|-------------------|--------|-------|--------|
| | Farms | Cattle | Farms | Cattle | Farms | Cattle | Farms | Cattle | Farms | Cattle | Farms | Cattle |
| Adams | 12 | 245 | 21 | 331 | 310 | 2307 | 789 | 5535 | 55 | 401 | 1187 | 8819 |
| Athens | 26 | 543 | 176 | 3392 | 268 | 2763 | 648 | 5561 | 47 | 262 | 1165 | 12521 |
| Brown | 20 | 2 13 | 92 | 988 | 605 | 5516 | 1337 | 9715 | 63 | 442 | 2117 | 16874 |
| Fayette | 7 | 166 | 74 | 1004 | 358 | 3011 | 259 | 1866 | 71 | 451 | 769 | 6498 |
| Gallia | 10 | 233 | 110 | 2214 | 0 | 0 | 1065 | 7196 | 11 | 56 | 1196 | 9699 |
| Highland | 15 | 164 | 101 | 1349 | 1016 | 8396 | 343 | 1873 | 35 | 261 | 1510 | 12043 |
| Hocking | 18 | 240 | 44 | 577 | 82 | 862 | 419 | 2861 | 25 | 151 | 588 | 4691 |
| Jackson | 24 | 516 | 52 | 763 | 45 | 542 | 574 | 5221 | 36 | 276 | 731 | 7318 |
| Lawrence | 49 | 984 | 81 | 1099 | 0 | 0 | 501 | 3788 | 56 | 337 | 687 | 6208 |
| Meigs | 27 | 442 | 74 | 1185 | 88 | 862 | 711 | 4966 | 30 | 182 | 930 | 7637 |
| Pike | 8 | 94 | 30 | 458 | 153 | 1461 | 434 | 2692 | 31 | 169 | 656 | 4874 |
| Ross | 28 | 495 | 150 | 2141 | 221 | 2612 | 625 | 4953 | 95 | 670 | 1119 | 10871 |
| Scioto | 25 | 573 | 195 | 4664 | 66 | 1092 | 701 | 4470 | 28 | 158 | 1015 | 10957 |
| Vinton | 8 | 79 | 20 | 255 | 71 | 757 | 400 | 2738 | 22 | 159 | 521 | 3988 |
| Total | 2 77 | 4987 | 1220 | 20495 | 3283 | 30257 | 8806 | 63284 | 605 | 3975 | 14191 | 122998 |

Table 7. Number of Dairy Farms and Milk Cattle, and Per cent of Each by Market Outlet, 14 Southern Ohio Counties, 1942

| County | Total Number of Farms | Total Number of Milk Cattle | For Fluid Consumption | | Fluid for Manufacture | | Butterfat | | Not Classified | |
|----------|--------------------------------|--------------------------------------|-----------------------|----------------|-----------------------|----------------|--------------|----------------|----------------|----------------|
| | | | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. |
| Adams | 1187 | 8819 | 2.7 | 6.5 | 26.2 | 26.2 | 66.5 | 62.8 | 4.6 | 4.5 |
| Athens | 1165 | 12521 | 17.4 | 31.4 | 23.0 | 22.1 | 55.6 | 44.4 | 4.0 | 2.1 |
| Brown | 2117 | 16874 | 5.3 | 7.1 | 28.6 | 32.7 | 63.1 | 57.6 | 3.0 | 2.6 |
| Fayette | 769 | 6498 | 10.5 | 18.0 | 46.6 | 46.4 | 33.7 | 28.7 | 9.2 | 6.9 |
| Gallia | 1196 | 9699 | 10.0 | 25.2 | 0.0 | 0.0 | 89.1 | 74.2 | 0.9 | 0.6 |
| Highland | 1510 | 12043 | 7.7 | 12.6 | 67.3 | 69.7 | 22.7 | 15.5 | 2.3 | 2.2 |
| Hocking | 588 | 4691 | 10.5 | 17.4 | 13.9 | 18.4 | 71.3 | 61.0 | 4.3 | 3.2 |
| Jackson | 731 | 7318 | 10.4 | 17.5 | 6.2 | 7.4 | 78.5 | 71.3 | 4.9 | 3.8 |
| Lawrence | 687 | 6208 | 18.9 | 33.6 | 0.0 | 0.0 | 72.9 | 61.0 | 8.2 | 5.4 |
| Meigs | 930 | 7638 | 10.9 | 21.3 | 9.5 | 11.3 | 76.4 | 65.0 | 3.2 | 2.4 |
| Pike | 656 | 4874 | 5.8 | 11.3 | 23.3 | 30.0 | 66.2 | 56.2 | 4.7 | 3.5 |
| Ross | 1119 | 10871 | 15.9 | 24.2 | 19.7 | 24.0 | 55.9 | 45.6 | 8.5 | 6.2 |
| Scioto | 1015 | 10957 | 21.7 | 47.8 | 6.5 | 10.0 | 69.1 | 40.8 | 2.7 | 1.4 |
| Vinton | 521 | 3988 | 5.4 | 8.4 | 13.6 | 19.0 | 76.8 | 68.6 | 4.2 | 4.0 |
| Total | 14191 | 122999 | 10.6 | 20.7 | 23.2 | 24.6 | 61.9 | 51.5 | 4.3 | 3.2 |

Table 8. Number of Milk Cattle per Farm by Market Outlet
14 Southern Ohio Counties, 1942

| County | Producer Distributor | Fluid to Distributor | Fluid to Manufacture | Butterfat | Not Classified | Total |
|----------|-------------------------|-------------------------|-------------------------|-----------|-------------------|-------|
| Adams | 21.9 | 15.8 | 7.4 | 7.0 | 7.3 | 7.4 |
| Athens | 20.9 | 19.3 | 10.2 | 8.6 | 5.6 | 10.7 |
| Brown | 10.6 | 10.7 | 9.1 | 7.0 | 7.0 | 8.0 |
| Fayette | 23.7 | 13.6 | 8.4 | 7.2 | 6.4 | 8.4 |
| Gallia | 23.3 | 20.1 | 0.0 | 6.8 | 5.1 | 8.1 |
| Highland | 10.9 | 13.4 | 8.3 | 5.5 | 7.4 | 8.0 |
| Hocking | 13.3 | 13.1 | 10.7 | 6.8 | 6.0 | 8.0 |
| Jackson | 21.5 | 14.7 | 12.0 | 9.1 | 7.7 | 10.0 |
| Lawrence | 20.1 | 13.6 | 0.0 | 7.6 | 6.0 | 9.0 |
| Meigs | 16.4 | 16.0 | 9.8 | 7.0 | 6.1 | 8.2 |
| Pike | 11.8 | 15.3 | 9.5 | 6.2 | 5.4 | 7.4 |
| Ross | 17.7 | 14.3 | 11.8 | 7.9 | 7.0 | 9.7 |
| Scioto | 22.2 | 24.0 | 16.5 | 6.4 | 5.6 | 10.8 |
| Vinton | 9.9 | 12.8 | 10.7 | 6.8 | 7.2 | 7.7 |
| Total | 18.0 | 16.6 | 9.2 | 7.2 | 6.6 | 8.7 |

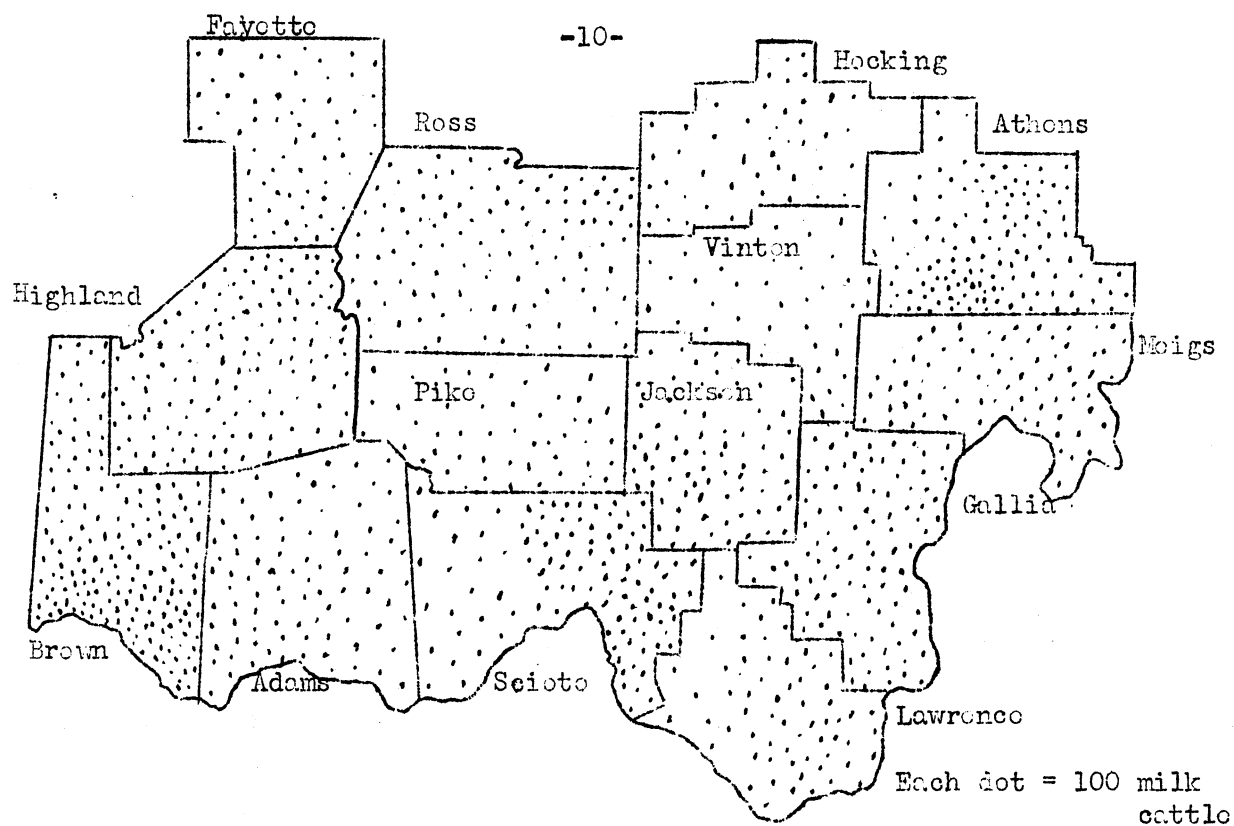


Figure 1. Milk Cattle Kept for Sale of all Dairy Products

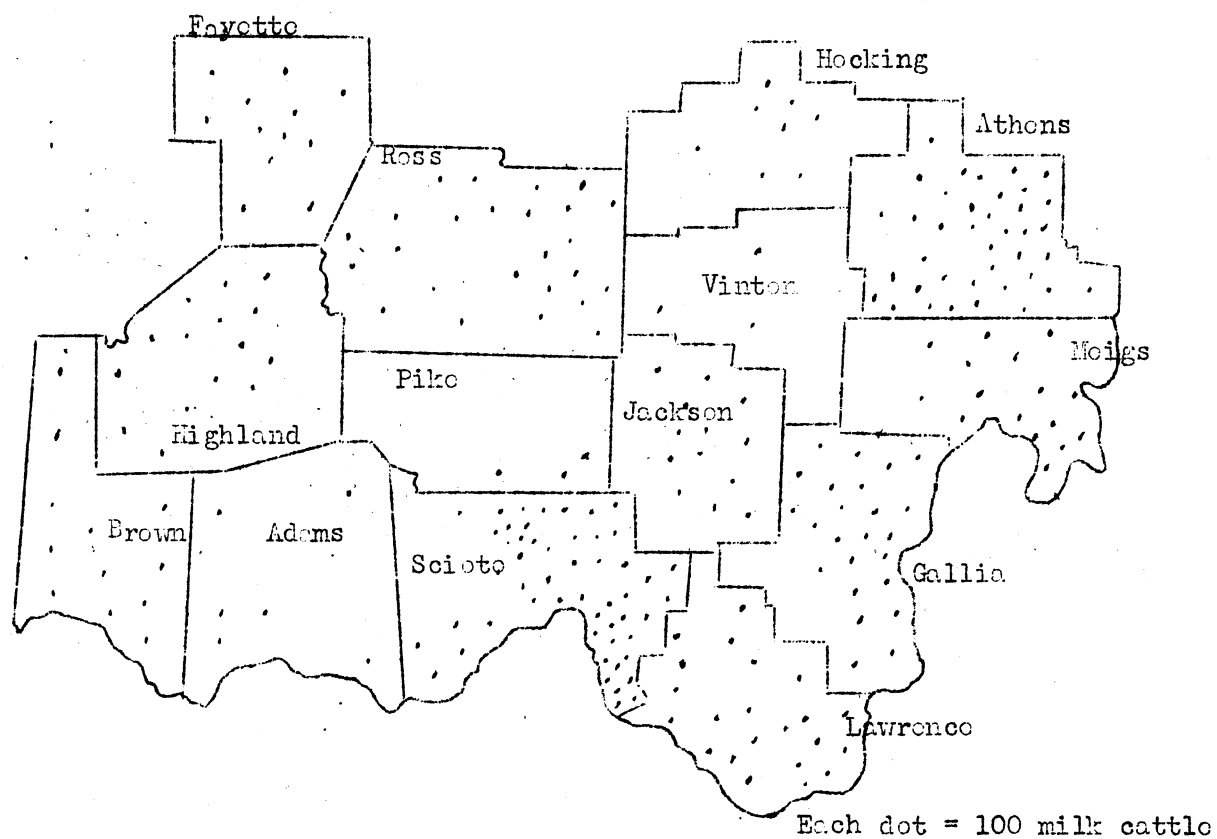


Figure 2. Milk Cattle Kept for Sale of Milk for Fluid Consumption

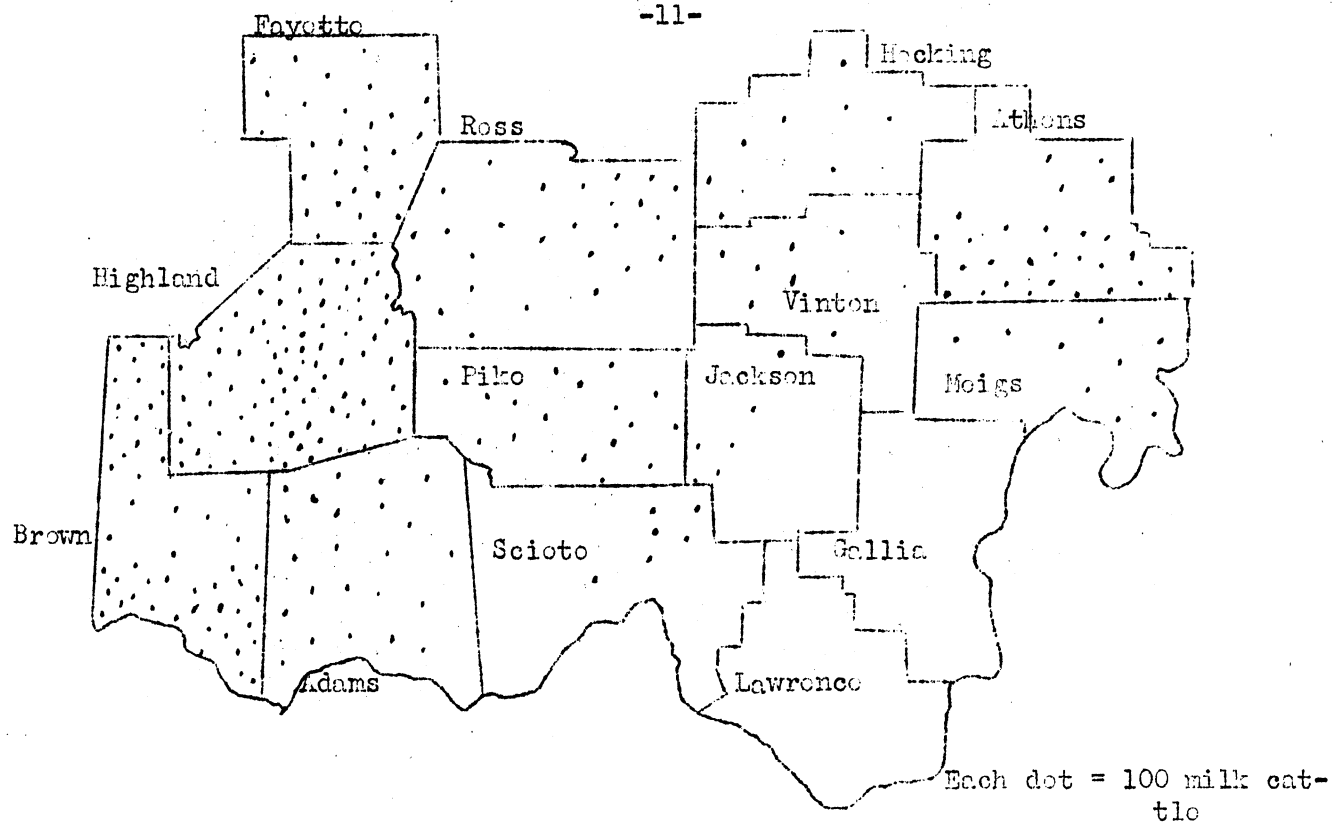


Figure 3. Milk Cattle Kept for Sale of Fluid Milk for Manufacture

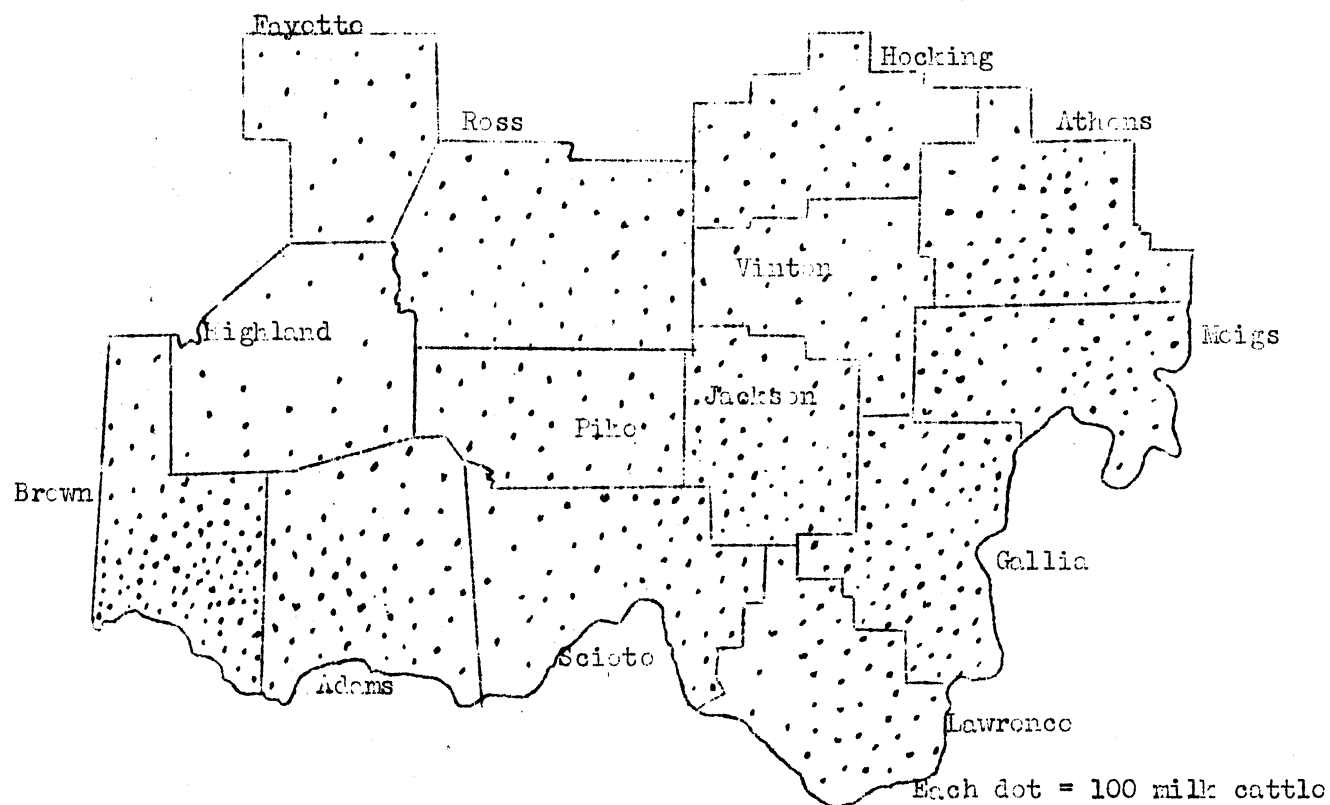


Figure 4. Milk Cattle Kept for Sale of Butterfat

Adams County

Adams County was lowest in this area in the proportion of its milk going for fluid consumption. Milk from only 32 farms with 563 dairy cattle was going for this purpose. This represents only about 2 per cent of the fluid consumption sales of this 14 county area. Almost two thirds of all dairy products sold were sold as butterfat. In seven townships over 75 per cent of the farms with 3 or more cows sold butterfat.

According to the 1940 Census, there were 119 farms in Adams County with dairy products as their major source of income. For the farms of the county as a whole for 1934 to 1938, dairying contributed about 25 per cent of the total cash farm income and the total value of dairy products sold was \$202,815.

Adams County had no distributors licensed in 1933 - 1935 under the Burk Act. In 1942 there were two dealers licensed. They were Harvey W. Bowman, Manchester and Fred Holliday, West Union.

Under the Burk Act there were 43 producer distributors under license. Of these six were reported as in business in 1942 and six more were added by those who reported in the survey, making a total of 12.

Fifteen cream stations held licenses in 1942. There were no manufacturing plants operating in the county.

Adams and Brown Counties joined in the employment of a health commissioner but each county had its own sanitarian. Adams County had the U.S. Public Health standard ordinance.

Table 9. Number of Dairy Farms and Milk Cattle and Per cent of Each by Market Outlet, Adams County

| Township | Total Number of Farms | Total Number of Milk Cattle | For Fluid Consumption | | Fluid for Manufacture | | Butterfat | | Not Classified | |
|-------------|--------------------------------|--------------------------------------|--------------------------|----------------|--------------------------|----------------|--------------|----------------|-------------------|----------------|
| | | | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. |
| Bratton | 68 | 409 | 0.0 | 0.0 | 39.7 | 43.8 | 60.3 | 56.2 | 0.0 | 0.0 |
| Brush Creek | 73 | 453 | 1.4 | 1.1 | 15.1 | 29.1 | 79.4 | 66.9 | 4.1 | 2.9 |
| Franklin | 62 | 535 | 4.8 | 15.1 | 9.7 | 15.0 | 85.6 | 69.9 | 0.0 | 0.0 |
| Green | 74 | 514 | 4.1 | 14.2 | 13.5 | 14.4 | 81.1 | 68.3 | 1.3 | 3.1 |
| Jefferson | 38 | 233 | 0.0 | 0.0 | 0.0 | 0.0 | 86.8 | 92.7 | 13.2 | 7.3 |
| Liberty | 84 | 794 | 3.6 | 9.9 | 27.4 | 34.4 | 67.8 | 53.4 | 1.2 | 2.3 |
| Meigs | 108 | 883 | 5.6 | 7.0 | 28.7 | 35.0 | 65.7 | 58.0 | 0.0 | 00.0 |
| Monroe | 92 | 657 | 4.3 | 7.0 | 17.4 | 27.9 | 65.2 | 56.3 | 13.1 | 8.8 |
| Oliver | 52 | 378 | 0.0 | 0.0 | 3.8 | 7.4 | 84.6 | 84.7 | 11.6 | 7.9 |
| Scott | 52 | 392 | 1.9 | 2.5 | 46.1 | 50.2 | 44.3 | 31.4 | 7.7 | 6.9 |
| Sprigg | 171 | 924 | 2.9 | 13.5 | 54.4 | 20.9 | 33.3 | 51.8 | 9.4 | 13.8 |
| Tiffin | 110 | 876 | 3.6 | 5.5 | 13.6 | 20.5 | 82.8 | 73.9 | 0.0 | 0.0 |
| Wayne | 113 | 1176 | 0.9 | 1.0 | 13.3 | 14.8 | 81.4 | 77.1 | 4.4 | 7.1 |
| Winchester | 89 | 591 | 1.1 | 5.1 | 41.6 | 45.7 | 55.1 | 47.4 | 2.2 | 1.8 |
| County | 1186 | 8815 | 2.7 | 6.5 | 26.2 | 26.2 | 66.5 | 62.8 | 4.6 | 4.5 |

Athens County

Milk from about one third of the dairy cows in this county was sold for fluid consumption. Manufacturing milk accounted for about 22% and sour cream for 44%. In terms of number of farms and number of cattle from which milk is sold for fluid consumption, Athens County is second in the area. Scioto is the only county that exceeds it.

The 1940 Census reports 340 farms in this county which had as their major source of income that from dairy products. No other source of income accounted for as many farms in this respect. 43 percent of all cash farm income was from dairying. Total value of dairy products for 1939 was \$393,731.

The following milk dealers were operating under license in 1942:

Banks Ice Cream Co., 79 East State Street, Athens
Imperial Ice Cream Company, Kern Court, Athens
Bennett Company, 79 East State Street, Athens
Nelsonville Pure Milk Company, Grosvenor Street, Nelsonville

In 1933-35 there were 50 producer distributors licensed under the Burk Act. Of these 11 were reported in business in 1942. In the survey 15 new ones were reported operating in 1942 making a total of 26 for the county. Six cream stations were operating under license in 1942.

This county has operated for some time under the U.S. Public Health service standard ordinance. The county has been known as one of the leaders in the state. Bacteriological controls have been worked out in cooperation with Ohio University.

Table 10. Number of Dairy Farms and Milk Cattle and Per cent of Each by Market Outlet, Athens County

| Township | Total Number of Farms | Total Number of Milk Cattle | For Fluid Consumption | | Fluid for Manufacture | | Butterfat | | Not Classified | |
|-----------|--------------------------------|--------------------------------------|--------------------------|----------------|--------------------------|----------------|--------------|----------------|-------------------|----------------|
| | | | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. |
| Alexander | 138 | 1571 | 15.2 | 40.2 | 37.7 | 28.6 | 45.7 | 30.0 | 1.4 | 1.2 |
| Ames | 113 | 1505 | 25.7 | 30.9 | 11.5 | 14.5 | 62.8 | 54.6 | 0.0 | 0.0 |
| Athens | 96 | 870 | 19.8 | 38.2 | 7.3 | 6.7 | 72.9 | 55.1 | 0.0 | 0.0 |
| Bern | 60 | 726 | 16.7 | 47.4 | 21.7 | 18.5 | 60.0 | 32.9 | 1.6 | 1.2 |
| Canaan | 94 | 1315 | 25.5 | 41.2 | 14.9 | 18.7 | 58.5 | 39.5 | 1.1 | 0.6 |
| Carthage | 70 | 787 | 1.4 | 2.3 | 25.8 | 26.8 | 71.4 | 70.3 | 1.4 | 0.6 |
| Dover | 54 | 577 | 20.4 | 32.0 | 0.0 | 0.0 | 70.4 | 62.6 | 9.2 | 5.4 |
| Lee | 83 | 846 | 16.9 | 27.6 | 31.3 | 28.1 | 51.8 | 44.3 | 0.0 | 0.0 |
| Lodi | 140 | 1651 | 19.3 | 31.4 | 27.9 | 27.8 | 46.4 | 37.8 | 6.4 | 3.0 |
| Rome | 76 | 803 | 23.7 | 40.5 | 19.7 | 17.2 | 55.3 | 41.7 | 1.3 | 0.6 |
| Trimble | 47 | 345 | 17.0 | 23.2 | 0.0 | 0.0 | 63.8 | 67.8 | 19.2 | 9.0 |
| Troy | 103 | 852 | 10.7 | 19.3 | 31.1 | 40.1 | 48.5 | 33.7 | 9.7 | 6.9 |
| Waterloo | 77 | 520 | 5.3 | 5.8 | 49.3 | 49.4 | 35.0 | 36.0 | 10.4 | 8.8 |
| York | 14 | 153 | 35.7 | 43.8 | 7.1 | 7.8 | 57.2 | 48.4 | 0.0 | 0.0 |
| County | 1165 | 12521 | 17.4 | 31.4 | 23.0 | 22.1 | 55.6 | 44.4 | 4.0 | 2.1 |

Brown County

This county had only 112 farms with 1201 dairy cattle from which milk was sold for fluid consumption. Its proximity to a large milk manufacturing plant at Hillsboro and one at Maysville, Kentucky accounts for the fact that about one third of the milk from the county is sold as manufacturing milk. A substantial shift from butterfat to milk for manufacturing has taken place within the last decade. Only Highland County of this area has more sales through this channel.

The 1940 Census reports 135 farms for which dairy products are the major source of income. Dairying accounts for 23 per cent of the cash farm income in Brown County with a total value of dairy products sold of \$296,924.

In 1942 the manufacturing plants and milk distributors licensed were as follows: Farmers Equity Union Creamery Co., Sardinia; Adamson Dairy, Georgetown; Ripley Dairy, 447 Main Street, Ripley. There were 12 cream stations under license.

Under the Burk Act there were 36 producer distributors. Of these 10 were reported as operating in 1942 and 10 additional ones were added by reporters, a total of 20.

The County had no milk ordinance in operation. A full time sanitarian was employed. The county was joined with Adams as a health district.

Table 11. Number of Dairy Farms and Milk Cattle and Per cent of Each by Market Outlet, Brown County

| Township | Total Number of Farms | Total Number of Milk Cattle | For Fluid Consumption | | Fluid for Manufacture | | Butterfat | | Not Classified | |
|------------|--------------------------------|--------------------------------------|--------------------------|----------------|--------------------------|----------------|--------------|----------------|-------------------|----------------|
| | | | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. |
| Byrd | 106 | 1024 | 0.0 | 0.0 | 30.2 | 35.5 | 65.1 | 59.9 | 4.7 | 4.6 |
| Clark | 148 | 1039 | 11.5 | 18.0 | 10.1 | 11.3 | 78.4 | 70.7 | 0.0 | 0.0 |
| Eagle | 104 | 844 | 8.7 | 12.0 | 19.2 | 22.9 | 70.2 | 64.3 | 1.9 | 0.8 |
| Franklin | 129 | 844 | 0.0 | 0.0 | 17.8 | 78.7 | 82.2 | 21.3 | 0.0 | 0.0 |
| Green | 121 | 857 | 3.3 | 4.9 | 52.9 | 60.3 | 42.1 | 32.3 | 1.7 | 2.5 |
| Huntington | 182 | 1366 | 2.7 | 2.7 | 38.5 | 43.3 | 58.3 | 53.7 | 0.5 | 0.2 |
| Jackson | 96 | 967 | 3.1 | 5.1 | 15.6 | 12.2 | 69.8 | 76.6 | 11.5 | 5.9 |
| Jefferson | 153 | 1270 | 9.8 | 12.5 | 11.8 | 19.2 | 71.3 | 61.8 | 7.2 | 5.9 |
| Lewis | 222 | 2076 | 3.6 | 3.5 | 29.4 | 33.9 | 62.1 | 58.3 | 4.9 | 4.3 |
| Perry | 125 | 978 | 4.0 | 4.8 | 64.0 | 66.5 | 32.0 | 28.7 | 0.0 | 0.0 |
| Pike | 98 | 608 | 4.1 | 4.6 | 8.2 | 10.4 | 87.7 | 85.0 | 0.0 | 0.0 |
| Pleasant | 172 | 1265 | 8.1 | 15.2 | 20.9 | 25.3 | 70.4 | 59.2 | 0.6 | 0.3 |
| Scott | 79 | 514 | 2.5 | 2.9 | 11.4 | 11.5 | 78.5 | 77.8 | 7.6 | 7.8 |
| Sterling | 143 | 1029 | 11.2 | 14.9 | 58.0 | 57.8 | 24.5 | 21.1 | 6.3 | 6.2 |
| Union | 137 | 1371 | 7.3 | 8.7 | 36.5 | 44.8 | 53.3 | 44.1 | 2.9 | 2.4 |
| Washington | 102 | 822 | 0.0 | 0.0 | 16.7 | 21.7 | 83.3 | 78.3 | 0.0 | 0.0 |
| County | 2117 | 16874 | 5.3 | 7.1 | 28.6 | 32.7 | 63.1 | 57.6 | 3.0 | 2.6 |

Fayette County

There were only 82 farms selling milk for fluid consumption representing approximately 15 per cent of the milk cattle of the county. Almost half of the milk was sold for manufacturing use.

In 1939 this county had the highest total agricultural income of this group of 14 counties. Dairying accounted for 9 per cent of the cash income. According to the 1940 Census the value of dairy products sold was \$197,393. The sale of live-stock accounted for \$2,302,071. Dairying is of little importance in the farming operation of Fayette County. Only 28 farms reported dairy products as their major source of income for 1939. The average income from this source for these 28 farms was about \$1,385 which was higher than for the 13 other counties with the exception of Ross.

One manufacturing plant was operating in 1942. It was the Cudahy Packing Company at Washington C.H. which was engaged in the manufacture of butter and other concentrated milk products. The following dealers were operating under license in 1942 in Washington C.H.: Light Dairy, 1024 Leesburg Avenue; Sugar Dairy, Dayton Avenue; and Sunnyside Dairy, 403 Circle Avenue. There were 7 cream stations licensed in 1942.

In 1933 - 1935 there were 18 producer distributors under license. Only five of these were so reported in the survey of 1942 and two were added, making a total of but 7 for the county.

Fayette County and Washington C.H. were combined for sanitary controls and operated under the U.S. Public Health Service Standard Ordinance.

Table 12. Number of Dairy Farms and Milk Cattle and Per cent of Each by Market Outlet, Fayette County

| Township | Total Number of Farms | Total Number of Milk Cattle | For Fluid Consumption | | Fluid for Manufacture | | Butterfat | | Not Classified | |
|-----------|--------------------------------|--------------------------------------|--------------------------|----------------|--------------------------|----------------|--------------|----------------|-------------------|----------------|
| | | | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. |
| Concord | 59 | 499 | 5.1 | 9.4 | 57.7 | 62.2 | 27.1 | 20.2 | 10.2 | 8.2 |
| Greene | 58 | 373 | 5.2 | 11.2 | 53.4 | 63.3 | 20.7 | 16.9 | 20.7 | 8.6 |
| Jasper | 77 | 568 | 11.7 | 24.1 | 41.5 | 40.5 | 36.4 | 21.5 | 10.4 | 13.9 |
| Jefferson | 126 | 908 | 6.3 | 12.7 | 38.9 | 41.9 | 44.5 | 38.8 | 10.3 | 6.6 |
| Madison | 62 | 613 | 1.6 | 1.9 | 46.8 | 47.0 | 41.9 | 41.3 | 9.7 | 9.8 |
| Marion | 55 | 508 | 7.3 | 12.6 | 50.9 | 44.3 | 30.9 | 35.0 | 10.9 | 8.1 |
| Paint | 81 | 735 | 9.9 | 17.7 | 42.0 | 41.2 | 43.2 | 37.8 | 4.9 | 3.3 |
| Perry | 72 | 707 | 5.5 | 6.5 | 68.1 | 72.0 | 15.3 | 13.4 | 11.1 | 8.1 |
| Union | 123 | 1160 | 26.8 | 44.7 | 48.0 | 35.9 | 18.7 | 14.5 | 6.5 | 4.9 |
| Wayne | 56 | 427 | 14.3 | 13.8 | 23.2 | 26.2 | 62.5 | 60.0 | 0.0 | 0.0 |
| County | 769 | 6498 | 10.5 | 18.0 | 46.6 | 46.4 | 33.7 | 28.7 | 9.2 | 6.9 |

Gallia County

The sale of butterfat is the predominant outlet for milk in Gallia County. It accounts for the milk from 89 per cent of the farms and 74 per cent of the dairy cattle. It was one of the two counties of the area with no milk reported sold in fluid form for manufacturing use.

The 1940 Census reported 121 farms in Gallia County with dairy products as the major source of income. The total value of dairy products sold for 1939 was \$218,602. Dairying contributed approximately 31 per cent of the total cash farm income for the county over the period 1934 to 1938.

Two firms were licensed in 1942 as milk dealers. They were Spring Hill Dairy Company of 218 2d Avenue, Gallipolis and Gallipolis Dairy, 544 2d Avenue. 10 cream stations were licensed. One of these was the Gallia County Coop. Dairy Sales Association.

Under the Burk Act there were 18 licensed producer distributors. Only 3 of these were reported as operating in 1942. Reporters listed 7 in business in 1942 that were not in the Burk Act list, making a total of 10 for the county.

This county at the time of the survey had no milk ordinance and no sanitarian. Because of the great increase of population and the highly specialized demands created by the ordnance plant at Pt. Pleasant, West Virginia, it was evident that a more adequate program of sanitary control was badly needed.

Table 13. Number of Dairy Farms and Milk Cattle and Per cent of Each by Market Outlet, Gallia County

| Township | Total Number of Farms | Total Number of Milk Cattle | For Fluid Consumption | | Fluid for Manufacture | | Butterfat | | Not Classified | |
|-------------|--------------------------------|--------------------------------------|--------------------------|----------------|--------------------------|----------------|--------------|----------------|-------------------|----------------|
| | | | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. |
| Addison | 113 | 911 | 15.0 | 29.2 | 0.0 | 0.0 | 85.0 | 70.8 | 0.0 | 0.0 |
| Cheshire | 72 | 441 | 9.7 | 20.4 | 0.0 | 0.0 | 88.9 | 78.5 | 1.4 | 1.1 |
| Clay | 51 | 483 | 9.8 | 32.9 | 0.0 | 0.0 | 88.2 | 66.5 | 2.0 | 0.6 |
| Green- | | | | | | | | | | |
| Gallipolis | 116 | 1180 | 14.6 | 35.8 | 0.0 | 0.0 | 80.2 | 61.2 | 5.2 | 3.0 |
| Greenfield | 42 | 285 | 0.0 | 0.0 | 0.0 | 0.0 | 92.9 | 95.4 | 7.1 | 4.6 |
| Guyon | 96 | 681 | 10.4 | 25.3 | 0.0 | 0.0 | 89.6 | 74.7 | 0.0 | 0.0 |
| Harrison | 81 | 538 | 4.9 | 12.3 | 0.0 | 0.0 | 95.1 | 87.7 | 0.0 | 0.0 |
| Huntington | 74 | 649 | 17.6 | 33.4 | 0.0 | 0.0 | 82.4 | 66.6 | 0.0 | 0.0 |
| Morgan | 98 | 863 | 19.4 | 40.2 | 0.0 | 0.0 | 80.6 | 59.8 | 0.0 | 0.0 |
| Ohio | 67 | 392 | 4.5 | 12.0 | 0.0 | 0.0 | 95.5 | 88.0 | 0.0 | 0.0 |
| Perry | 114 | 962 | 0.9 | 3.5 | 0.0 | 0.0 | 99.1 | 96.5 | 0.0 | 0.0 |
| Raccoon | 69 | 665 | 10.1 | 30.4 | 0.0 | 0.0 | 89.9 | 69.6 | 0.0 | 0.0 |
| Springfield | 83 | 869 | 20.5 | 48.8 | 0.0 | 0.0 | 79.5 | 51.2 | 0.0 | 0.0 |
| Walnut | 120 | 780 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 | 100.0 | 0.0 | 0.0 |
| County | 1196 | 9699 | 10.0 | 25.2 | 0.0 | 0.0 | 80.1 | 74.2 | 0.9 | 0.6 |

Highland County

The milk from 67.3 per cent of the farms and 69.7 per cent of the milk cows of this county was sold fluid for manufacturing use. The number of farms selling milk in fluid form increased by 832 from 1929 to 1939 according to the Census. This large increase is a result of the increase in sale of milk for manufacturing use.

In Highland County for the year 1939 there were 220 farms which reported dairy products as their major source of income. The total value of dairy products sold for the county was \$579,998 in 1939. Dairying contributed about 19 per cent of the total cash farm income for this county over the period 1934 to 1938.

The Carnation Company operated a plant at Hillsboro that accounted for the large increase in milk sold for manufacturing. The milk distributors licensed in 1942 were Maple Grove Dairy and Spring Grove Dairy both of Greenfield.

There were 17 cream stations licensed in 1942.

Highland County had 31 producer distributors licensed under the Burk Act. Of these 8 were operating as such in 1942 and seven additional ones were reported making a total of 15 for the county.

This county had no milk ordinance and no sanitarian at the time of the survey.

Table 14. Number of Dairy Farms and Milk Cattle and Per cent of Each by Market Outlet, Highland County

| Township | Total Number of Farms | Total Number of Milk Cattle | For Fluid Consumption | | Fluid for Manufacture | | Butterfat | | Not Classified | |
|-------------|--------------------------------|--------------------------------------|--------------------------|----------------|--------------------------|----------------|--------------|----------------|-------------------|----------------|
| | | | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. |
| Brush Creek | 79 | 506 | 0.0 | 0.0 | 54.4 | 59.1 | 45.6 | 40.9 | 0.0 | 0.0 |
| Clay | 91 | 698 | 5.5 | 8.9 | 65.9 | 68.9 | 25.3 | 19.9 | 3.3 | 2.3 |
| Concord | 92 | 805 | 0.0 | 0.0 | 69.6 | 76.9 | 12.8 | 16.9 | 7.6 | 6.2 |
| Dodson | 105 | 798 | 21.9 | 28.7 | 65.7 | 62.8 | 12.4 | 8.5 | 0.0 | 0.0 |
| Fairfield | 116 | 1016 | 19.0 | 24.4 | 69.8 | 65.3 | 8.6 | 8.3 | 2.6 | 2.0 |
| Homer | 92 | 621 | 1.1 | 1.7 | 69.6 | 70.2 | 29.3 | 28.2 | 0.0 | 0.0 |
| Jackson | 84 | 512 | 0.0 | 0.0 | 38.1 | 48.6 | 61.9 | 51.4 | 0.0 | 0.0 |
| Liberty | 103 | 963 | 31.1 | 39.1 | 58.2 | 51.7 | 1.0 | 0.7 | 9.7 | 8.5 |
| Madison | 125 | 896 | 1.6 | 0.8 | 53.6 | 69.1 | 30.8 | 25.2 | 4.0 | 4.9 |
| Marshall | 51 | 298 | 0.0 | 0.0 | 72.5 | 80.2 | 27.5 | 19.8 | 0.0 | 0.0 |
| New Market | 91 | 822 | 6.6 | 13.0 | 73.6 | 72.4 | 18.7 | 14.2 | 1.1 | 0.3 |
| Paint | 134 | 1036 | 1.5 | 1.4 | 82.8 | 88.1 | 15.7 | 10.5 | 0.0 | 0.0 |
| Penn | 113 | 1240 | 10.6 | 24.8 | 76.1 | 69.3 | 13.3 | 5.9 | 0.0 | 0.0 |
| Salem | 57 | 447 | 10.5 | 14.8 | 66.7 | 72.7 | 22.8 | 12.5 | 0.0 | 0.0 |
| Union | 65 | 573 | 6.2 | 12.6 | 80.0 | 77.5 | 13.8 | 9.9 | 0.0 | 0.0 |
| Washington | 62 | 403 | 0.0 | 0.0 | 72.6 | 78.7 | 22.6 | 13.9 | 4.8 | 7.4 |
| White Oak | 50 | 409 | 2.0 | 3.2 | 80.0 | 82.6 | 15.0 | 10.5 | 6.0 | 3.7 |
| County | 1510 | 12043 | 7.7 | 12.6 | 67.3 | 69.7 | 22.7 | 15.5 | 2.3 | 2.2 |

Hocking County

There were 62 farms selling milk for fluid consumption and 82 farms selling milk for manufacture from this county. This constituted only 24.4 per cent of the farms with 3 or more dairy cows. With the exception of Vinton County there were fewer dairy cattle in this county than in any other in this area.

The total value of dairy products sold was \$103,409 for 1939. There were 60 farms in the county with dairy products as the major source of income. The income of these farms from dairying averaged about \$850 which was about the average of the whole area. About 30 per cent of the total cash farm income for this County came from dairying over the period 1934 to 1938.

The firms licensed as milk distributors in 1942 were Frasure & Brown Dairy, E. Front Street, Logan and Logan Home Dairy, 801 E. Main Street. There were no manufacturing plants in the county. There were 7 cream stations under license in 1942.

In 1933-35 there were licensed 36 producer distributors of which 9 were re-corded as operating in 1942. In addition 9 were reported that were not operating as such at the time of the Burk Act. This makes a total of 18 in 1942, just half as many as were licensed in 1933 - 1935.

Hocking and Vinton were joined as a health district. There was no program of sanitary control applied to milk at the time of the survey.

Table 15. Number of Dairy Farms and Milk Cattle and Per cent of Each by Market Outlet, Hocking County

| Township | Total Number of Farms | Total Number of Milk Cattle | For Fluid Consumption | | Fluid for Manufacture | | Butterfat | | Not Classified | |
|-------------|--------------------------------|--------------------------------------|--------------------------|----------------|--------------------------|----------------|-----------------------------|----------------|-------------------|----------------|
| | | | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. |
| Benton | 43 | 288 | 4.6 | 7.3 | 4.7 | 6.9 | 90.7 | 85.8 | 0.0 | 0.0 |
| Falls-Falls | | | | | | | | | | |
| Gore | 107 | 890 | 29.0 | 43.1 | 6.5 | 7.8 | 58.9 | 46.0 | 5.6 | 3.1 |
| Good Hope | 52 | 328 | 5.8 | 10.7 | 15.4 | 20.7 | 69.2 | 61.6 | 9.6 | 7.0 |
| Green | 50 | 451 | 8.0 | 16.6 | 8.0 | 8.9 | 70.0 | 65.0 | 14.0 | 5.3 |
| Laurel | 26 | 183 | 11.5 | 18.3 | 19.2 | 16.4 | 69.3 | 65.6 | 0.0 | 00.0 |
| Marion | 71 | 569 | 2.8 | 7.2 | 28.2 | 29.9 | 63.4 | 58.9 | 5.6 | 4.0 |
| Perry | 53 | 424 | 9.4 | 13.7 | 5.7 | 13.0 | 84.9 | 73.4 | 0.0 | 0.0 |
| Salt Creek | 78 | 689 | 1.3 | 2.0 | 30.8 | 48.5 | 67.9 | 49.5 | 0.0 | 0.0 |
| Starr | 44 | 378 | 9.1 | 9.8 | 6.8 | 9.3 | 77.3 | 71.9 | 6.8 | 9.0 |
| Ward | | | Of no market importance. | | | | Some little sour cream sold | | | |
| Washington | 64 | 491 | 10.9 | 24.2 | 9.4 | 8.4 | 79.7 | 67.4 | 0.0 | 0.0 |
| County | 588 | 4691 | 10.5 | 17.4 | 13.9 | 18.4 | 71.3 | 61.0 | 4.3 | 3.2 |

Jackson County

By far the most predominant outlet for this county is sour cream. The milk from 78.5 per cent of the farms with 71.3 per cent of the cows is sold as butterfat. Only four townships sold more than one-fourth of their milk for fluid consumption while three townships had no sales through such channels.

Eighty-five farms of Jackson County reported dairy products as the major source of income in 1939 according to the 1940 Census. Total value of dairy products sold in 1939 was \$125,131. Dairying ranked highest as a source of cash farm income accounting for 30 per cent of the total for the years 1934 to 1938.

There were no plants licensed in 1942 that were engaged primarily in manufacturing milk. Two distributors operating in Jackson were Westlake Dairy Company, 136 East 2d Street and Whipple Creamery Company, 201 West Main Street. There were 6 cream stations under license.

Under the Burk Act there were 41 producer-distributors of which 19 or almost half were operating in 1942. Those reporting listed 5 additional giving the county a total of 24 in 1942.

Jackson County had no program of sanitary control and inspection of dairy farms at the time of the survey.

Table 16. Number of Dairy Farms and Milk Cattle and Per cent of Each by Market Outlet, Jackson County

| Township | Total Number of Farms | Total Number of Milk Cattle | For Fluid | | Fluid for | | Butterfat | | Not | |
|-------------|--------------------------------|--------------------------------------|-----------|--------|-----------|--------|-----------|--------|------|--------|
| | | | Farm | Cattle | Farm | Cattle | Farm | Cattle | Farm | Cattle |
| | | | pct. | pct. | pct. | pct. | pct. | pct. | pct. | pct. |
| Bloomsfield | 59 | 632 | 11.9 | 15.2 | 0.0 | 0.0 | 88.1 | 84.0 | 0.0 | 0.0 |
| Coal | 25 | 273 | 12.0 | 31.9 | 12.0 | 13.2 | 64.0 | 50.5 | 12.0 | 4.4 |
| Franklin | 82 | 935 | 26.8 | 47.8 | 1.2 | 1.4 | 67.1 | 47.3 | 4.9 | 3.4 |
| Hamilton | 34 | 381 | 0.0 | 0.0 | 0.0 | 0.0 | 97.1 | 95.3 | 2.9 | 4.7 |
| Jackson | 49 | 446 | 8.2 | 14.1 | 0.0 | 0.0 | 89.8 | 85.2 | 2.0 | 0.7 |
| Jefferson | 84 | 802 | 5.9 | 9.7 | 1.2 | 0.3 | 89.3 | 86.9 | 3.6 | 3.1 |
| Liberty | 64 | 517 | 0.0 | 0.0 | 3.1 | 2.9 | 89.1 | 88.4 | 7.8 | 9.7 |
| Lick | 30 | 301 | 43.3 | 59.1 | 0.0 | 0.0 | 56.7 | 40.9 | 0.0 | 0.0 |
| Madison | 97 | 1064 | 19.6 | 27.0 | 0.0 | 0.0 | 70.1 | 65.4 | 10.3 | 7.6 |
| Milton | 37 | 444 | 5.4 | 7.9 | 2.7 | 2.0 | 89.2 | 88.5 | 2.7 | 1.6 |
| Scioto | 122 | 1136 | 0.8 | 0.8 | 29.5 | 39.5 | 63.1 | 55.0 | 6.6 | 4.7 |
| Washington | 48 | 387 | 0.0 | 0.0 | 2.1 | 4.4 | 97.9 | 95.6 | 0.0 | 0.0 |
| County | 731 | 7318 | 10.4 | 17.5 | 6.2 | 7.4 | 78.5 | 71.3 | 4.9 | 3.8 |

Lawrence County

No milk was sold from this county in fluid form for manufacture, but the milk from one third of the cows was sold for fluid consumption.

The 1940 Census reported 113 farms with dairy products as the major source of income for 1939. The average income from dairying on these 113 farms was \$1185. The total value of dairy products sold in 1939 was \$173,518. Dairying with 25 per cent of the Total, ranked second to fruits as a source of cash farm income for the 5 year period 1934 to 1938.

There were two milk distributors licensed in 1942. They were the Hy-Grade Milk Company of 2420 S. 9th Street and the Ohio Valley Milk Company, 812 Neal Avenue, Iron-
ton. There were only 3 cream stations licensed.

The county ranks high in producer distribution. Under the Burk Act there were 33 under license and of these 17 were reported as operating in 1942. An additional 32 were reported for 1942 giving the county a total of 49, the highest in the area.

This county had no program of milk control. The city of Ironton had adopted the standard ordinance. Several farms in this county were under West Virginia inspection.

Table 17. Number of Dairy Farms and Milk Cattle and Per cent of Each
by Market Outlet, Lawrence County

| Township | Total Number of Farms | Total Number of Milk Cattle | For Fluid Consumption | | Fluid for Manufacture | | Butterfat | | Not Classified | |
|------------|--------------------------------|--------------------------------------|--------------------------|----------------|--------------------------|----------------|--------------|----------------|-------------------|----------------|
| | | | Farm pet. | Cattle pet. | Farm pet. | Cattle pet. | Farm pet. | Cattle pet. | Farm pet. | Cattle pet. |
| Aid | 62 | 708 | 11.3 | 30.4 | 0.0 | 0.0 | 88.7 | 69.6 | 0.0 | 0.0 |
| Decatur | 7 | 101 | 42.9 | 56.4 | 0.0 | 0.0 | 57.1 | 43.6 | 0.0 | 0.0 |
| Elizabeth | 26 | 415 | 42.3 | 63.4 | 0.0 | 0.0 | 46.2 | 33.7 | 1.5 | 2.9 |
| Fayette | 80 | 561 | 7.5 | 14.3 | 0.0 | 0.0 | 72.5 | 73.6 | 20.0 | 12.1 |
| Hamilton | 9 | 101 | 66.7 | 87.1 | 0.0 | 0.0 | 33.3 | 12.9 | 0.0 | 2.9 |
| Lawrence | 60 | 557 | 23.3 | 33.6 | 0.0 | 0.0 | 61.7 | 59.4 | 15.0 | 7.0 |
| Mason | 77 | 543 | 10.4 | 16.0 | 0.0 | 0.0 | 89.6 | 84.0 | 0.0 | 0.0 |
| Perry | 27 | 189 | 18.5 | 22.7 | 0.0 | 0.0 | 81.5 | 77.3 | 0.0 | 0.0 |
| Rome | 93 | 663 | 17.2 | 36.2 | 0.0 | 0.0 | 74.2 | 55.2 | 8.5 | 8.6 |
| Symmes | 59 | 573 | 5.1 | 14.3 | 0.0 | 0.0 | 94.9 | 85.7 | 0.0 | 0.0 |
| Union | 45 | 465 | 31.1 | 51.8 | 0.0 | 0.0 | 68.9 | 48.2 | 0.0 | 0.0 |
| Upper | 31 | 264 | 41.9 | 45.1 | 0.0 | 0.0 | 35.5 | 22.8 | 22.6 | 32.2 |
| Washington | 14 | 93 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 | 100.0 | 0.0 | 0.0 |
| Windsor | 145 | 1137 | 17.3 | 32.6 | 0.0 | 0.0 | 71.7 | 59.1 | 11.0 | 8.3 |
| County | 687 | 6208 | 18.9 | 33.6 | 0.0 | 0.0 | 72.9 | 61.0 | 8.2 | 5.4 |

Meigs County

This is another county for which sour cream is the principal market outlet. Only 189 farms with 3 or more dairy cows were reported as selling whole milk either for fluid consumption or for manufacturing use.

The 1940 Census shows 117 farms with dairy products as their major source of income for 1939. For these farms the average income from Dairying was \$710. The total value of dairy products sold in 1939 was \$176,304. Dairying accounted for 33 per cent of the cash farm income for Meigs County for the years 1934 to 1938, ranking first in this respect.

Guyan Creamery Company of Racine was the only firm licensed in 1942 as a handler of whole milk. There were 6 cream stations under license.

There were 29 producer distributors licensed under the Burk Act of which 12 were operating in 1942. In addition 15 more were recorded in the survey making a total for the county of 27 in 1942.

The U. S. Public Health Service Standard ordinance was in effect. A sanitarian was in charge of inspecting and enforcement.

Table 18. Number of Dairy Farms and Milk Cattle and Per cent of Each by Market Outlet, Meigs County

| TOWNSHIP | Total Number of Farms | Total Number of Milk Cattle | For Fluid Consumption | | Fluid for Manufacture | | Butterfat | | Not Classified | |
|-----------|--------------------------------|--------------------------------------|--------------------------|----------------|--------------------------|----------------|--------------|----------------|-------------------|----------------|
| | | | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. |
| Bedford | 60 | 575 | 6.7 | 10.4 | 11.7 | 17.8 | 80.0 | 70.6 | 1.6 | 1.2 |
| Chostor | 149 | 1251 | 6.0 | 7.7 | 13.4 | 17.7 | 75.2 | 71.4 | 5.4 | 3.3 |
| Columbia | 74 | 653 | 0.0 | 0.0 | 8.1 | 12.2 | 89.2 | 85.8 | 2.7 | 2.0 |
| Lebanon | 59 | 518 | 23.7 | 49.4 | 3.4 | 5.8 | 57.6 | 33.2 | 15.3 | 11.6 |
| Letart | 19 | 127 | 5.3 | 19.7 | 0.0 | 0.0 | 94.7 | 80.3 | 0.0 | 0.0 |
| Olive | 84 | 541 | 0.0 | 0.0 | 20.2 | 19.2 | 89.8 | 80.8 | 0.0 | 0.0 |
| Orange | 49 | 740 | 49.0 | 47.2 | 13.2 | 8.3 | 38.8 | 44.6 | 0.0 | 0.0 |
| Rutland | 80 | 538 | 2.5 | 9.1 | 0.0 | 0.0 | 97.5 | 90.9 | 0.0 | 0.0 |
| Salem- | 118 | 693 | 9.0 | 2.4 | 0.0 | 0.0 | 91.5 | 89.2 | 7.6 | 8.4 |
| Salisbury | 63 | 524 | 2.2 | 40.8 | 0.0 | 0.0 | 77.8 | 59.2 | 0.0 | 0.0 |
| Scipio | 89 | 626 | 7.9 | 16.9 | 18.0 | 23.8 | 74.1 | 59.3 | 0.0 | 0.0 |
| Sutton | 86 | 851 | 29.1 | 53.5 | 16.3 | 13.5 | 53.5 | 32.6 | 1.1 | 0.4 |
| Total | 930 | 7637 | 10.9 | 21.3 | 9.5 | 11.3 | 76.4 | 65.0 | 3.2 | 2.4 |

Pike County

Pike County had only 38 farms selling milk for fluid consumption representing 5.8 per cent of the farms and 11.3 per cent of the cattle. The milk from two thirds of the farms is sold as butterfat.

In 1939 there were 59 farms reporting dairy products as their major source of income with an average of about \$695 per farm from this source. The total value of dairy products sold for the county in 1939 was \$98,933. For the 5 year period 1934 to 1938 dairying accounted for 23 per cent of the total cash farm income of the county.

There were no milk distributors nor manufacturers under license in 1942, but 10 cream stations were licensed.

There were 18 producer distributors licensed under the Burk Act. None of these were reported as operating in 1942. There were, however, 8 farms so listed in the survey.

This county had no Board of Health program for inspection of milk.

Table 19. Number of Dairy Farms and Milk Cattle and Per cent of Each by Market Outlet, Pike County

| Township | Total Number of Farms | Total Number of Milk Cattle | For Fluid Consumption | | Fluid for Manufacture | | Butterfat | | Not Classified | |
|------------|--------------------------------|--------------------------------------|--------------------------|----------------|--------------------------|----------------|--------------|----------------|-------------------|----------------|
| | | | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. |
| Beaver | 37 | 317 | 5.4 | 7.6 | 29.7 | 37.5 | 64.9 | 54.9 | 0.0 | 0.0 |
| Benton | 52 | 292 | 0.0 | 0.0 | 13.5 | 17.1 | 84.6 | 81.5 | 1.9 | 1.4 |
| Camp Creek | 51 | 316 | 9.8 | 15.5 | 2.0 | 2.5 | 80.4 | 76.6 | 20.0 | 5.4 |
| Jackson | 40 | 232 | 0.0 | 0.0 | 12.5 | 20.7 | 67.5 | 65.5 | 20.0 | 13.8 |
| Marion | 56 | 520 | 19.6 | 37.3 | 23.2 | 22.5 | 57.2 | 40.2 | 0.0 | 0.0 |
| Mifflin | 19 | 101 | 0.0 | 0.0 | 42.1 | 43.5 | 52.6 | 53.5 | 5.3 | 3.0 |
| Newton | 55 | 379 | 0.0 | 0.0 | 14.6 | 17.4 | 70.9 | 62.8 | 14.5 | 19.8 |
| Pebble | 76 | 418 | 1.3 | 1.4 | 22.4 | 24.9 | 73.7 | 71.5 | 2.6 | 2.2 |
| Peepee | 62 | 529 | 6.5 | 7.2 | 27.4 | 44.4 | 59.7 | 44.8 | 6.4 | 3.6 |
| Perry | 35 | 306 | 0.0 | 0.0 | 34.3 | 41.5 | 62.9 | 57.5 | 2.8 | 1.0 |
| Scioto | 31 | 327 | 41.9 | 65.5 | 22.6 | 11.3 | 35.5 | 23.4 | 0.0 | 0.0 |
| Seal | 45 | 485 | 0.0 | 0.0 | 42.2 | 51.5 | 57.8 | 48.5 | 0.0 | 0.0 |
| Sunfish | 61 | 432 | 0.0 | 0.0 | 42.6 | 55.1 | 57.4 | 44.9 | 0.0 | 0.0 |
| Union | 36 | 220 | 5.6 | 12.3 | 5.6 | 8.2 | 83.3 | 76.3 | 5.5 | 3.2 |
| County | 656 | 4874 | 5.8 | 11.3 | 23.3 | 30.0 | 66.2 | 56.2 | 4.7 | 3.5 |

Ross County

Just about one half the milk in this county was disposed of in fluid form and one half in the form of butterfat. That part sold in fluid form was evenly divided between use for fluid consumption and for manufacture.

The 1940 Census reports 115 farms with dairy products as their major source of income for 1939. The average income from dairying for these 115 farms was about \$1460. This was the highest for any of the 14 counties in this area. The value of dairy products sold in 1939 was reported as \$296,650. Dairying accounted for 13 per cent of the cash farm income for Ross County for the period 1934 to 1938. This was the only county of the 14 in which dairying was exceeded by two other sources of cash income. They were hogs and wheat.

While dairying did not rank high as a source of income in the county there was some concentration of market outlets. The receiving plant of the M & R Dietetics Laboratories of Columbus assembled milk for manufacturing from some areas outside the county. Other buyers of whole milk were: Chillicothe Pure Milk Company, 113 E. 7th Street; Home Dairy, Riverside Street; Model Dairy, 182 Null Street and Jones Dairy all of Chillicothe. There were 14 cream stations under license. The Borden Company operated an ice cream plant in Chillicothe but the supplies for this were not bought directly from farmers. The milk from several farms in the western part of the county was going to the Kroger Grocery and Baking Company in Dayton.

There were 44 holders of producer distributor licenses under the Burk Act. Of these one half, 22 were operating in 1942. Six additional farms were so listed giving the county a total of 28 in 1942.

This county had a very efficient sanitary control through inspection and supervision of its milk supply. The county and the city of Chillicothe worked together in maintenance of a well equipped laboratory. Each had its own sanitarian and the milk supply was supervised consistently for both city and county distributors.

Table 20. Number of Dairy Farms and Milk Cattle and Per cent of Each by Market Outlet, Ross County

| Township | Total Number of Farms | Total Number of Milk Cattle | For Fluid Consumption | | Fluid for Manufacture | | Butterfat | | Not Classified | |
|-------------|--------------------------------|--------------------------------------|--------------------------|----------------|--------------------------|----------------|--------------|----------------|-------------------|----------------|
| | | | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. |
| Buckskin | 75 | 884 | 26.7 | 37.8 | 33.3 | 38.1 | 40.0 | 24.1 | 0.0 | 0.0 |
| Colerain | 100 | 1319 | 6.0 | 8.9 | 50.0 | 54.9 | 39.0 | 29.8 | 5.0 | 6.4 |
| Concord | 134 | 1065 | 8.2 | 12.9 | 25.4 | 29.4 | 56.7 | 52.0 | 9.7 | 5.7 |
| Deerfield | 54 | 493 | 3.7 | 6.3 | 27.7 | 32.8 | 66.7 | 55.4 | 1.9 | 5.5 |
| Franklin | 27 | 198 | 0.0 | 0.0 | 0.0 | 0.0 | 63.0 | 80.8 | 37.0 | 19.2 |
| Green | 105 | 980 | 37.1 | 42.3 | 28.6 | 26.1 | 31.4 | 27.6 | 2.9 | 4.0 |
| Harrison | 41 | 310 | 0.0 | 0.0 | 31.7 | 47.4 | 56.1 | 46.5 | 12.2 | 6.1 |
| Huntington | 79 | 576 | 3.8 | 11.6 | 2.5 | 3.3 | 93.7 | 85.2 | 0.0 | 0.0 |
| Jefferson | 28 | 311 | 35.7 | 41.1 | 0.0 | 0.0 | 60.7 | 56.3 | 3.6 | 2.6 |
| Liberty | 73 | 669 | 16.4 | 34.4 | 8.2 | 9.8 | 56.2 | 45.0 | 19.2 | 10.8 |
| Paint | 64 | 581 | 1.6 | 7.7 | 15.6 | 19.3 | 73.4 | 61.0 | 9.4 | 12.0 |
| Paxton | 35 | 272 | 8.6 | 7.3 | 8.6 | 34.6 | 60.0 | 42.3 | 22.8 | 15.8 |
| Scioto | 52 | 550 | 26.3 | 51.5 | 3.5 | 2.7 | 52.6 | 38.9 | 17.6 | 6.9 |
| Springfield | 42 | 507 | 45.2 | 50.1 | 16.7 | 27.2 | 38.1 | 22.7 | 0.0 | 0.0 |
| Twin | 106 | 1020 | 9.4 | 13.7 | 3.8 | 2.7 | 72.6 | 72.0 | 14.2 | 11.6 |
| Union | 99 | 1136 | 27.3 | 38.4 | 20.2 | 17.6 | 48.5 | 39.3 | 4.0 | 4.7 |
| County | 1119 | 10871 | 15.9 | 24.2 | 19.7 | 24.0 | 55.9 | 45.6 | 8.5 | 6.2 |

Scioto County

This county had more farms and cattle from which milk was sold for fluid consumption than any of the 13 other counties. The 220 farms selling through this channel represented only 22 per cent of the farms but had 48 per cent of the dairy cattle.

The value of dairy products sold for the year 1939 was reported by the Census as \$332,785 and the number of farms reporting dairy products as the major source of income was 211 with an average income from this source of \$1285 per farm. Dairying accounted for 36 per cent of the cash farm income for the 5 years 1934 to 1938.

Five firms were licensed as milk buyers. They were:

Borden's Dairy, 237 2d Street, Portsmouth
Ideal Milk Company, 1637 10th Street, Portsmouth
Portsmouth Pure Milk Company, Clay & Gallia, Portsmouth
Select Dairy, 2345 Gallia Street, Portsmouth
Gilpin Dairy, Sciotoville

There were 3 cream stations under license.

Under the Burk Act there were 42 farms licensed as producer distributors. Of these only 5 were reported as in business in 1942. There were, however, 20 additional farms so reported in the 1942 survey.

This county was not operating under a milk ordinance but the city of Portsmouth had operated for some time under regulations. The city employed a sanitarian that gave all his time to milk inspection and supervision.

Table 21. Number of Dairy Farms and Milk Cattle and Per cent of Each by Market Outlet, Scioto County

| Township | Total Number of Farms | Total Number of Milk Cattle | For Fluid Consumption | | Fluid for Manufacture | | Butterfat | | Not Classified | |
|-------------|--------------------------------|--------------------------------------|--------------------------|----------------|--------------------------|----------------|--------------|----------------|-------------------|----------------|
| | | | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. |
| Bloom | 107 | 1044 | 17.8 | 50.9 | 0.0 | 0.0 | 82.2 | 49.1 | 0.0 | 0.0 |
| Brush Creek | 49 | 242 | 2.1 | 4.1 | 0.0 | 0.0 | 95.9 | 94.2 | 0.0 | 1.7 |
| Clay | 23 | 363 | 47.8 | 79.4 | 17.4 | 6.3 | 34.8 | 14.3 | 0.0 | 0.0 |
| Green | 71 | 1135 | 50.7 | 73.3 | 0.0 | 0.0 | 35.2 | 20.4 | 14.1 | 6.3 |
| Harrison | 62 | 770 | 21.0 | 34.2 | 12.9 | 15.3 | 66.1 | 50.5 | 0.0 | 0.0 |
| Jefferson | 49 | 362 | 16.3 | 39.2 | 10.2 | 13.8 | 73.5 | 47.0 | 0.0 | 0.0 |
| Madison | 208 | 1880 | 16.8 | 30.7 | 8.7 | 19.9 | 74.5 | 49.4 | 0.0 | 0.0 |
| Morgan | 45 | 503 | 0.0 | 0.0 | 33.3 | 61.6 | 66.7 | 38.7 | 0.0 | 0.0 |
| Nile | 60 | 790 | 35.0 | 67.1 | 0.0 | 0.0 | 58.3 | 30.4 | 6.7 | 2.5 |
| Porter | 72 | 1072 | 59.7 | 75.3 | 0.0 | 0.0 | 30.6 | 21.7 | 9.7 | 3.0 |
| Rarden | 64 | 147 | 1.6 | 3.4 | 1.6 | 2.7 | 96.8 | 93.9 | 0.0 | 0.0 |
| Rush | 38 | 331 | 7.9 | 20.5 | 15.8 | 36.6 | 73.3 | 42.9 | 0.0 | 0.0 |
| Union | 44 | 360 | 2.3 | 0.8 | 4.6 | 1.7 | 79.5 | 89.2 | 13.6 | 8.3 |
| Valley | 30 | 1125 | 50.0 | 76.8 | 23.3 | 7.6 | 27.6 | 15.6 | 0.0 | 0.0 |
| Vernon | 49 | 497 | 22.4 | 42.1 | 0.0 | 0.0 | 77.6 | 57.9 | 0.0 | 0.0 |
| Washington | 44 | 336 | 4.5 | 32.1 | 0.0 | 0.0 | 95.5 | 67.9 | 0.0 | 0.0 |
| County | 1015 | 10957 | 21.7 | 47.8 | 6.5 | 10.0 | 69.1 | 40.8 | 2.7 | 1.4 |

Vinton County

The milk from slightly over three fourths of the farms with 3 or more milk cows with 68.6 per cent of the cattle was sold as butterfat. Seven townships had no sale of milk for fluid consumption and four townships reported no milk sold in fluid form from farms with 3 or more cows.

The 1940 Census reports 38 farms with their major source of income from dairy products. The average income per farm from this source was only \$460 for 1939. The value of dairy products sold in 1939 was reported as \$53,087 - the lowest for any county in the state. However, dairying accounted for 33 per cent of the cash farm income for the period 1934 to 1938.

There was one distributor, Sanitary Dairy Company of McArthur and one cream station under license in 1942.

Under the Burk Act there were 25 producer distributors licensed. Four were reported in operation in 1942 and four more were added making a total of 8 for the county.

The county was joined with Hocking as a health district. It did not have a program of sanitary inspection of milk supplies.

Table 22. Number of Dairy Farms and Milk Cattle and Per cent of Each by Market Outlet, Vinton County

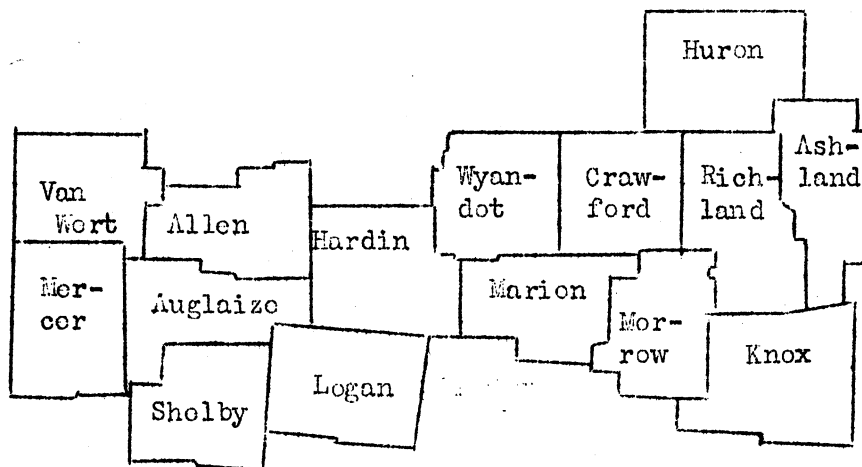
| Township | Total Number of Farms | Total Number of Milk Cattle | For Fluid | | Fluid for | | Butterfat | | Not | |
|-------------|--------------------------------|--------------------------------------|-------------|-------------|-------------|-------------|-----------|--------|-------|--------|
| | | | Consumption | Manufacture | Consumption | Manufacture | Farm | Cattle | Farm | Cattle |
| | | | Farm | Farm | Farm | Farm | pct. | pct. | pct. | pct. |
| | | | pct. | pct. | pct. | pct. | | | | |
| Brown | 26 | 201 | 0.0 | 0.0 | 0.0 | 0.0 | 30.8 | 31.8 | 69.2* | 68.2* |
| Clinton | 59 | 424 | 11.8 | 14.6 | 16.9 | 26.2 | 71.2 | 59.2 | 0.0 | 0.0 |
| Eagle | 37 | 278 | 0.0 | 0.0 | 37.8 | 46.4 | 62.2 | 54.0 | 0.0 | 0.0 |
| Elk | 40 | 333 | 30.0 | 42.0 | 2.5 | 3.3 | 62.5 | 50.5 | 5.0 | 4.2 |
| Harrison | 33 | 255 | 15.2 | 36.6 | 3.0 | 11.9 | 81.8 | 51.5 | 0.0 | 0.0 |
| Jackson | 57 | 365 | 0.0 | 0.0 | 33.3 | 48.5 | 66.7 | 51.5 | 0.0 | 0.0 |
| Knox | 48 | 407 | 2.1 | 6.1 | 16.6 | 21.4 | 81.3 | 72.5 | 0.0 | 0.0 |
| Madison | 27 | 165 | 0.0 | 0.0 | 0.0 | 0.0 | 96.3 | 98.2 | 3.7 | 1.8 |
| Richland | 44 | 378 | 0.0 | 0.0 | 6.8 | 21.2 | 93.2 | 78.8 | 0.0 | 0.0 |
| Swan | 40 | 352 | 7.5 | 6.0 | 37.5 | 38.3 | 52.5 | 54.3 | 2.5 | 1.4 |
| Vinton | 39 | 272 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 | 100.0 | 0.0 | 0.0 |
| Wilkesville | 71 | 587 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 | 100.0 | 0.0 | 0.0 |
| County | 521 | 3988 | 5.4 | 8.4 | 13.6 | 19.0 | 76.8 | 68.6 | 4.2 | 4.0 |

* Those farms not classified are either of no market importance or may sell a little sour cream.

FARM SALES OF OHIO MILK THROUGH DIFFERENT OUTLETS

VI. West Central Ohio Area: Allen, Ashland, Auglaize, Crawford,
Hardin, Huron, Knox, Logan, Marion, Mercer, Morrow,
Richland, Shelby, Van Wert and Wyandot

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R. W. Sherman



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Farm Sales of Ohio Milk Through Different Outlets

Part VI

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FARM SALES OF MILK THROUGH DIFFERENT OUTLETS

VI. West Central Ohio Area: Allen, Ashland, Auglaize, Crawford, Hardin, Huron, Knox, Logan, Marion, Mercer, Morrow, Richland, Shelby, Van Wert and Wyandot/¹

C. G. McBride and R. W. Sherman

Sources of Data

This study, the sixth of a series, is based upon a survey of all farms with three or more dairy cattle at the time of the last test for tuberculosis conducted by the U.S. Bureau of Animal Industry and the Ohio Department of Agriculture. The records were obtained through the cooperation of these authorities and agricultural extension agents in charge of the records in the counties.

A list of herd owners was arranged by townships. Several copies of each list were made and these were mailed to a carefully selected group of key men, well distributed in each township. Each recipient of a list was asked to check the disposition of milk from each farm on which he had this information. When a producer was selling both to a city milk dealer and to a manufacturing outlet, he was recorded in the city milk dealer outlet.

When the checked sheets were returned the reports for each township were combined and in most cases it was found that a practically complete record had been obtained. In a few townships, the returns were not full enough to constitute a satisfactory record and other contacts were made in these townships in order to complete the data. A very high percentage of those who received lists cooperated by returning them promptly. Without this generous response on the part of those who were asked to assist, this survey would not have been possible. The cost in time and money of personal visitation to every township would have been prohibitive.

Limitations of the Study

Some difficulties were encountered in obtaining the information from the testing records. Some herds designated as mixed breeds undoubtedly were in whole or part beef cattle, but there was no way to determine the exact numbers. In areas surrounding the cities, there were many farms with 3 or 4 cattle tested. Replies indicated that many of these were kept primarily for home use but in some cases a small amount of milk or butterfat might be sold at certain times. Those who reported often lacked accurate information as to disposal of dairy products on such farms.

Some farmers had moved out of the township between the time of the test and the survey, but this factor was in large measure adjusted by the addition of new names

¹Area I comprised Delaware, Fairfield, Franklin, Licking, Madison, Pickaway and Union Counties. Area II, Carroll, Columbiana, Holmes, Medina, Portage, Stark, Summit, Tuscarawas and Wayne Counties. Area III, Defiance, Fulton, Hancock, Henry, Lucas, Ottawa, Paulding, Putnam, Sandusky, Seneca, Williams and Wood Counties. Area IV, Butler, Champaign, Clark, Clermont, Clinton, Darke, Greene, Hamilton, Miami, Montgomery, Preble and Warren Counties. Area V, Adams, Athens, Brown, Fayette, Gallia, Highland, Hocking, Jackson, Lawrence, Meigs, Pike, Ross, Scioto and Vinton.

by those reporting. In a very few cases, where all attempts to obtain a complete record left too large a percentage of farms unclassified, some adjustments were made, based on the records of adjacent townships with approximately the same conditions. Despite the limitations described above, it is believed that the study presents a dependable picture of the disposal of milk from the farms of the area.

Type of Farming

This area of 15 counties is one in which mixed farming predominates. Hogs and dairy products are the leading sources of income as shown in Table 1. For the area as a whole the 5 year average income from hogs was \$13,455,350 and for dairy products \$12,510,160. Poultry and eggs ranked third with \$7,116,210 and wheat fourth with \$5,646,580. In yields per acre of wheat, corn and hay the 15 counties were slightly above those for the state as a whole. In Knox and Morrow Counties, sheep ranked within the top four sources of farm income. The type of farming is determined in part by the lack of any large concentration of city population within the area.

Table 1. Important Sources and Percentage of Total Cash Farm Income Contributed by, and Rank of Each
15 West Central Ohio Counties, 1934 - 1938 Average*

| County | Total Cash Farm Income | Rank of Sources of Income and Their Relative Importance | | | | | | | |
|----------|------------------------|---|---------------|---------|---------------|---------|---------------|---------|---------------|
| | | First | Pct. of Total | Second | Pct. of Total | Third | Pct. of Total | Fourth | Pct. of Total |
| Allen | \$ 3,939,000 | Hogs | 26 | DAIRY | 23 | Poultry | 13 | Wheat | 9 |
| Ashland | 2,559,000 | DAIRY | 33 | Poultry | 18 | Wheat | 14 | Hogs | 11 |
| Auglaize | 4,288,000 | Hogs | 30 | DAIRY | 22 | Poultry | 14 | Wheat | 10 |
| Crawford | 3,818,000 | Hogs | 27 | DAIRY | 20 | Wheat | 11 | Poultry | 11 |
| Hardin | 4,955,000 | Hogs | 26 | DAIRY | 14 | Wheat | 10 | Poultry | 8 |
| Huron | 3,569,000 | DAIRY | 24 | Wheat | 15 | Poultry | 12 | Hogs | 11 |
| Knox | 3,469,000 | DAIRY | 28 | Hogs | 17 | Sheep | 17 | Poultry | 15 |
| Logan | 3,664,000 | DAIRY | 24 | Hogs | 24 | Poultry | 10 | Wheat | 9 |
| Marion | 3,752,000 | Hogs | 33 | DAIRY | 17 | Poultry | 10 | Wheat | 9 |
| Mercer | 4,753,000 | Hogs | 30 | DAIRY | 21 | Poultry | 15 | Wheat | 10 |
| Morrow | 2,670,000 | DAIRY | 28 | Hogs | 21 | Poultry | 14 | Sheep | 13 |
| Richland | 3,266,000 | DAIRY | 29 | Poultry | 16 | Hogs | 16 | Wheat | 11 |
| Shelby | 4,206,000 | Hogs | 26 | DAIRY | 22 | Poultry | 13 | Corn | 10 |
| Van Wert | 4,210,000 | DAIRY | 18 | Hogs | 17 | Corn | 17 | Poultry | 12 |
| Wyandot | 3,753,000 | Hogs | 30 | DAIRY | 17 | Wheat | 14 | Poultry | 10 |
| Total | 56,871,000 | Hogs | 24 | DAIRY | 22 | Poultry | 13 | Wheat | 10 |

* Derived from estimates of gross cash farm income as published by Department of Rural Economics of the Ohio State University and Ohio Agricultural Experiment Station, 1934 - 1938.

Roads

Movement of milk and cream into market outlets is dependent to a great extent upon the types of highway available for their transportation.

The public road mileage of the 15 counties as of January 1, 1941 classified as to type is given in Table 2. The area was well covered with roads that would permit all year round pickup of milk or cream at farms. It had a relatively high percentage of gravel roads. With the exception of Knox and Ashland counties the percentage of earth roads was low.

Table 2. Public Road Mileage of the Area by Types and by Counties as of January 1, 1941

| County | Hard Surface | | Gravel | | Earth | | Total |
|----------|--------------|------|---------|------|---------|------|----------|
| | Miles | Pct. | Miles | Pct. | Miles | Pct. | Miles |
| Allen | 142.26 | 15.3 | 778.34 | 83.6 | 10.45 | 1.1 | 931.05 |
| Ashland | 157.45 | 15.5 | 454.77 | 44.7 | 404.72 | 39.8 | 1016.94 |
| Auglaize | 75.40 | 8.7 | 764.32 | 88.7 | 22.20 | 2.6 | 861.92 |
| Crawford | 542.33 | 64.5 | 270.49 | 32.1 | 28.53 | 3.4 | 841.35 |
| Hardin | 113.33 | 12.3 | 751.94 | 81.3 | 59.61 | 6.4 | 924.88 |
| Huron | 366.03 | 41.3 | 503.20 | 56.8 | 17.00 | 1.9 | 886.23 |
| Knox | 95.30 | 8.1 | 815.50 | 69.2 | 268.30 | 22.7 | 1179.10 |
| Logan | 102.70 | 11.3 | 780.35 | 86.0 | 24.10 | 2.7 | 907.15 |
| Marion | 154.14 | 19.5 | 559.97 | 71.0 | 74.77 | 9.5 | 788.88 |
| Mercer | 110.22 | 10.8 | 892.44 | 87.4 | 18.20 | 1.8 | 1020.86 |
| Morrow | 243.02 | 25.6 | 623.62 | 65.8 | 81.36 | 8.6 | 948.00 |
| Richland | 190.40 | 17.5 | 802.47 | 73.7 | 96.10 | 8.8 | 1088.97 |
| Shelby | 57.71 | 6.3 | 851.98 | 93.7 | 0.00 | 0.0 | 909.69 |
| Van Wert | 272.66 | 29.4 | 623.93 | 67.2 | 32.31 | 3.5 | 928.90 |
| Wyandot | 274.53 | 33.5 | 514.61 | 62.7 | 31.20 | 3.8 | 820.34 |
| Total | 2897.48 | 20.6 | 9987.93 | 71.1 | 1168.85 | 8.3 | 14054.26 |

Comparison of Study Data with Census and Crop and Livestock Reports

The United States Census and the Federal-State Cooperative Crop and Livestock Reporting Service have a listing of milk cattle as "cows and heifers, 2 years old and over". This classification can be used to compare with the data collected for this study as shown in Table 3.

For four of the five areas summarized previously factors were used to convert the number of cattle tested in the last tuberculosis test to number of milk cows. This was done by taking several hundred farms for which records were available both for number of milk cattle tested for tuberculosis and actual number of milk cows in the herds. This percentage relation was applied for all herds in the area as an estimate of the number of milk cows on the farms included in the study. In these two sets of records 1736 identical farms were compared for this area. It was found that for each 100 cattle tested there were 65.9 cows being milked. This ratio has been used as a conversion factor to convert "all cattle" of the test records to an estimated number of "milk cows". In three counties there was such a large number of farms for which both figures were available that individual conversion factors were used. For Hardin County this factor was 61.7, for Huron, 71.6 and for Marion 57.2. These computed figures are compared with the crop and livestock estimates in Table 3.

The census reported 173,030 cows and heifers 2 years old and over kept mainly for milk production as of April 1, 1940 for these 15 counties. This figure is about half way between the Crop and Livestock estimate for January 1, 1942 and the number of milk cows included in this study. The figure for the study is lower than the other two partly because of the exclusion of the one and two cow herds.

Table 3. Number of Cows and Heifers, 2 Years Old and Over, Number of Cows Milked per Farm and Number of Cattle and Milk Cows per Farm in the Study, by Counties

| County | Milk cows & heifers 2 yrs. old & over Crop & Livestock estimates, Jan.1, 1942* | | Milk cows in study* | Cows** per farm 1940 Census | All cattle per farm in study | Cows only per farm in study* |
|-------------|---|--|------------------------|-----------------------------------|------------------------------------|------------------------------------|
| | | | | | | |
| Allen | 12,600 | | 10,014 | 5.1 | 8.4 | 5.6 |
| Ashland | 11,600 | | 9,880 | 5.7 | 10.0 | 6.6 |
| Auglaize | 15,300 | | 10,965 | 6.1 | 10.7 | 6.4 |
| Crawford | 11,600 | | 11,970 | 5.8 | 10.8 | 7.1 |
| Hardin | 12,300 | | 8,290 | 5.1 | 8.4 | 5.2 |
| Huron | 12,000 | | 10,201 | 5.2 | 8.9 | 6.4 |
| Knox | 14,300 | | 11,011 | 5.5 | 9.9 | 6.5 |
| Logan | 15,000 | | 10,092 | 6.2 | 10.1 | 6.6 |
| Marion | 9,000 | | 7,276 | 5.4 | 10.5 | 6.0 |
| Mercer | 16,900 | | 11,276 | 5.9 | 9.2 | 6.0 |
| Morrow | 11,100 | | 8,311 | 5.3 | 9.3 | 6.1 |
| Richland | 14,600 | | 12,051 | 5.5 | 10.2 | 6.7 |
| Shelby | 14,900 | | 10,773 | 6.6 | 10.6 | 7.0 |
| Van Wert | 10,200 | | 8,892 | 4.6 | 8.1 | 5.4 |
| Wyandot | 10,200 | | 8,963 | 5.3 | 9.5 | 6.2 |
| 15 Counties | 191,600 | | 149,965 | 5.5 | 9.6 | 6.3 |
| State | 1,073,000 | | xxxx | 5.3 | xxxx | xxx |

* Conversion factor of 65.9 for all but Hardin County with 61.7, Huron with 71.6 and Marion with 57.2 as explained in text above.

** Cows and heifers 2 years old and over kept mainly for milk production, 1939

† Preliminary

In Table 4 is listed the number of farms selling whole milk and butterfat for 1939, according to the 1940 Census. Of milk disposed of in 1939 in the form of fluid milk or butterfat in the area, approximately 61% was sold in fluid form and 39% as butterfat. From 1929 to 1939 there was an increase of 6047 farms selling whole milk according to the Census. In the same time there was a decrease of 6524 farms selling butterfat. Much of this change represented milk going to condenseries.

This study showed a few more farms selling milk in fluid form than the Census in spite of the fact that the one and two cow herds were omitted from the study. This difference can be attributed to the fact that the study was for late 1941 and early 1942 while the Census was for 1939 and in this time there was a definite trend in this area from sale of sour cream to fluid milk to condenseries.

Table 4. Sales of Whole Milk and Butterfat and Number of Farms Reporting Each, by County, 1939

| County | Farms report- ing whole milk sold (number) | Annual sales of whole milk per farm reporting (gallons) | Farms report- ing cream sold as butterfat (number) | Annual sales of butterfat per farm (pounds) |
|-------------|---|--|---|--|
| Allen | 995 | 2372.6 | 888 | 646.4 |
| Ashland | 769 | 4025.4 | 949 | 587.1 |
| Auglaize | 1,219 | 2675.1 | 778 | 975.4 |
| Crawford | 528 | 3353.0 | 1,166 | 657.1 |
| Hardin | 999 | 2754.7 | 809 | 673.7 |
| Huron | 803 | 3674.6 | 794 | 506.3 |
| Knox | 668 | 4101.3 | 1,422 | 625.7 |
| Logan | 1,065 | 3644.9 | 896 | 757.1 |
| Marion | 702 | 3487.4 | 657 | 579.5 |
| Mercer | 1,817 | 2579.0 | 655 | 663.2 |
| Morrow | 501 | 3369.4 | 1,353 | 573.2 |
| Richland | 789 | 3830.9 | 1,215 | 582.0 |
| Shelby | 1,031 | 3100.9 | 971 | 835.5 |
| Van Wert | 1,386 | 2248.5 | 615 | 586.5 |
| Wyandot | 470 | 2998.7 | 1,202 | 681.2 |
| 12 Counties | 13,742 | 3083.9 | 14,370 | 658.3 |

Source: 1940 Census of Agriculture, First Series, Ohio

There was an increase of approximately 16% in population of this area from 1900 to 1940. The population of 8 of the 15 counties increased and in 7 counties it decreased. The large part of the increase came in Allen and Richland Counties. While the population of this area was increasing 16% the number of dairy cows increased by 42% with a resultant rise in cows per 100 population from 26.9 to 33.2. For the area as a whole this meant at least 4 times as many cows as necessary to supply milk for fluid consumption if all production was available for such use.

Table 5. Number of Dairy Cows Compared with Total Population by County, 1900 and 1940

| County | Dairy Cows* | Total Population | Cows per 100 Population | Dairy Cows* | Total Population | Cows per 100 Population |
|-------------|----------------|---------------------|----------------------------|----------------|---------------------|----------------------------|
| Allen | 11,515 | 73,303 | 15.7 | 8,294 | 47,976 | 17.3 |
| Ashland | 10,920 | 29,785 | 36.7 | 8,053 | 21,184 | 38.0 |
| Auglaize | 12,667 | 28,037 | 45.2 | 7,949 | 31,192 | 25.5 |
| Crawford | 10,752 | 35,571 | 30.2 | 8,364 | 33,915 | 24.7 |
| Hardin | 10,487 | 27,061 | 38.8 | 8,541 | 31,187 | 27.4 |
| Huron | 10,556 | 34,800 | 30.3 | 8,758 | 32,330 | 27.1 |
| Knox | 12,993 | 31,024 | 41.9 | 8,659 | 27,768 | 31.2 |
| Logan | 13,431 | 29,624 | 45.3 | 8,773 | 30,420 | 28.8 |
| Marion | 8,437 | 44,898 | 18.8 | 6,315 | 28,678 | 22.0 |
| Mercer | 15,002 | 26,256 | 57.1 | 8,336 | 28,021 | 29.7 |
| Morrow | 10,931 | 15,646 | 69.9 | 6,945 | 17,879 | 38.8 |
| Richland | 13,064 | 73,853 | 17.7 | 10,210 | 44,289 | 23.1 |
| Shelby | 13,475 | 26,071 | 51.7 | 8,135 | 24,625 | 33.0 |
| Van Wert | 9,669 | 26,759 | 36.1 | 7,323 | 30,394 | 24.1 |
| Wyandot | 9,131 | 19,219 | 47.5 | 6,774 | 21,125 | 32.1 |
| 15 Counties | 173,030 | 521,907 | 33.2 | 121,429 | 450,983 | 26.9 |

Source: U.S. Census of Population and of Agriculture, 1900 and 1940

* Cows and heifers 2 years old and over kept mainly for milk production, 1939

Changes in Market Outlets, 1903 to 1942

One of the first records of a systematic survey of outlets for milk and butter-fat from Ohio farms is found in the annual report of the Ohio Dairyman's Association for 1903.^{/1} Professor J. W. Docker of Ohio State University compiled this directory of butter and cheese factories and milk skimming and shipping stations. The totals for the state were: butter factories, 148; skimming stations, 77; milk shipping stations, 22; American cheese factories, 114; Swiss cheese factories, 92. The report did not include milk distributors who purchased from farmers nor producer-distributors who sold milk at retail.

In Table 6 is given a classification of dairy plants exclusive of milk distributors that were operating in this area of 15 counties in 1903. The manufacture of butter was most widely distributed over the area. Eleven of the 15 counties contained creameries.

Table 6. Dairy Plants in Area in 1903
(excluding those engaged only in Milk Distribution)

| County | Skimming stations | | | Butter manufacturing (creameries) | | | American cheese manufacturing | | | Total Total |
|----------|-------------------|---|---|-----------------------------------|---|---|-------------------------------|---|---|-------------|
| | P | S | C | P | S | C | P | S | C | |
| Allen | - | - | - | - | - | - | - | - | - | 0 |
| Ashland | 1 | - | - | 1 | - | - | 1 | - | - | 3 |
| Auglaize | 1 | - | - | 2 | - | - | - | - | - | 3 |
| Crawford | - | - | - | 1 | - | - | - | - | - | 1 |
| Hardin | - | - | - | 1 | - | - | 3 | - | - | 4 |
| Huron | - | - | - | 3 | - | - | 4 | - | - | 7 |
| Knox | 3 | - | - | 3 | - | 1 | - | - | - | 7 |
| Logan | 1 | - | 3 | - | - | 4 | 3 | - | - | 11 |
| Marion | - | - | - | - | - | - | - | - | - | 0 |
| Morcer | - | - | - | 2 | - | - | - | - | - | 2 |
| Morrow | 1 | - | - | 1 | - | 1 | - | - | - | 3 |
| Richland | 1 | - | - | 1 | - | - | - | - | - | 2 |
| Shelby | 4 | - | 2 | 3 | - | - | - | - | - | 9 |
| Van Wert | - | - | - | - | - | - | - | - | - | 0 |
| Wyandot | - | - | - | 2 | - | - | - | - | - | 2 |
| Total | 12 | - | 5 | 20 | - | 6 | 11 | - | - | 54 |

KEY: P = Private
S = Stock
C = Cooperative

Source: Ohio Dairyman's Association Report of 1903

^{/1} Reprint Annual Report Ohio Dairyman's Association, 1903, J. W. Docker

A survey of sources of market milk and butterfat in Ohio was made in 1931 by McBride and Cowden.^{/1} This survey, like that of Professor Decker, located the plants engaged in the manufacture of dairy products from both whole milk and cream. At this time there were 5 counties in this area, Allen, Auglaize, Hardin, Mercer and Van Wert that had plants using whole milk. There were also the following important churning points: Anna, Ashland, Belle Center, Bellefontaine, Bucyrus, Crestline, Fort Recovery, Jackson Center, Kenton, Lima, Loudenville, Mansfield, Marion, Mt. Vernon, New Bremen, Ohio City, Upper Sandusky and Wapakoneta.

In 1931 several of these counties were within the range of Cleveland inspection for either milk or cream. In Table 7 the distribution of farms under Cleveland inspection is given by counties.

Table 7. Farms Under Cleveland Milk and Cream Inspection in May 1931

| County | Milk | Cream | Total |
|----------|------|-------|-------|
| Allen | - | 43 | 43 |
| Ashland | 381 | - | 381 |
| Crawford | - | 68 | 68 |
| Huron | 509 | - | 509 |
| Knox | 40 | 22 | 62 |
| Logan | 96 | 203 | 299 |
| Marion | - | 44 | 44 |
| Morrow | 4 | 14 | 18 |
| Richland | 58 | 27 | 85 |
| Shelby | - | 202 | 202 |
| Wyandot | 21 | - | 21 |
| Total | 1109 | 623 | 1732 |

By 1941 when this survey was started some further changes had taken place. A directory^{/2} of dairy plants exclusive of those engaged only in milk distribution gave a distribution as shown in Table 8. The most significant change was a decline in the volume of butter manufactured and an increase in the plants engaged in the manufacture of several products including ice cream.

^{/1} Ohio Agricultural Experiment Station Bulletin #523, Sources of Market Milk and Butterfat in Ohio, C. G. McBride and T. K. Cowdon, 1933

^{/2} Who's Who in the Butter, Cheese and Milk Industries in 1941, published by the Urner-Barry Company, New York City.

Table 8. Dairy Plants in Area in 1941
(excluding those engaged only in Milk Distribution)

| County | Butter Manufac- turing | Milk con- densing or evaporating | American cheese manufacturing | Combination including ice cream | Total |
|----------|------------------------------|--|-------------------------------------|---------------------------------------|-------|
| Allen | 1 | 2 | - | 3 | 6 |
| Ashland | - | - | - | 2 | 2 |
| Auglaize | 2 | - | 1 | 1 | 4 |
| Crawford | 2 | - | - | - | 2 |
| Hardin | 3 | - | - | - | 3 |
| Huron | 1 | - | - | 1 | 2 |
| Knox | - | - | - | 1 | 1 |
| Logan | 2 | 1 | - | 4 | 7 |
| Marion | - | - | - | 3 | 3 |
| Mercer | 1 | 2 | - | - | 3 |
| Morrow | 1 | - | - | - | 1 |
| Richland | 1 | - | - | 2 | 3 |
| Shelby | 1 | - | - | 3 | 4 |
| Van Wert | - | - | 1 | - | 1 |
| Wyandot | 1 | - | - | - | 1 |
| Total | 16 | 5 | 2 | 20 | 43 |

Cooperative Marketing by Producers

There were several small milk marketing cooperatives selling the milk of producers serving the towns within the area. They were: Allen County Cooperative Milk Producers Assn., Willard Milk Producers Assn., Shelby County Cooperative Milk Producers and the North Central Ohio Cooperative Dairy Sales Assn. selling to the dealers of Mansfield.

The North Central Farm Bureau Cooperative Assn. at Shelby, Ohio operated a creamery. It was organized in 1936 by pooling the resources of the North Central Dairy Sales Assn. a bargaining cream association and the sale of stock through the efforts of the state and county units of the Farm Bureau

Status of Sanitary Control

There were three types of sanitary control in operation in the area. A few towns had local ordinances. Six counties had the U.S. Public Health service standard ordinance. In the Indian Lake and Lake St. Mary's districts sanitary controls were under the direct supervision of the Ohio Department of Health because these were state Parks.

The intensity of supervision of the milk supply by sanitary control agencies varied widely over the area. In three or four counties there was no milk control program. In several counties the supervision by the State Department of Health over the lake supplies resulted in the local people receiving the benefit of this through inspection of local dealers supplies.

Summary of Study by Counties and Townships

The material included in this section is a compilation of the information furnished by those who assisted in the mail survey supplemented by some additional data obtained in personal visits to the counties. Tables 9 to 11 and Figures 1 to 4 summarize the material for the district by counties. A discussion of each county with township analyses follows.

Table 9 summarizes the distribution of farms and cattle among the market outlets and Table 10 shows the percentage distribution of these farms and cattle by market outlet. In Table 11 is given the number of cattle per farm by market outlet.

Milk sold by producer-distributors belongs in the same outlet classification as milk sold to dealers for fresh fluid consumption. In the county tables they are combined. To find the number of farms and cattle involved in supplying consumers with fresh milk it is necessary in all instances to combine the "Producer-Distributor" figures with those of "Fluid to Distributor". The total number of farms in this classification was 3360 or 14.1 per cent. These 3360 farms, however, have 19.0 per cent of the milk cattle because the larger dairy farms seek the city market outlets. The farms selling butterfat rank lowest in average number of cattle per farm.

Among the counties the variation in per cent of dairy farms selling milk for fluid consumption is from 3.3 per cent for Mercer County to 28.2 per cent for Ashland County. In the case of per cent of milk cattle on farms selling milk for fluid consumption, Mercer County was low with 3.5 per cent and Ashland was high with 41.1 per cent.

The Figures 1 to 4 show the concentration of milk cattle in the district. Figure 1 includes all cattle in herds with 3 or more dairy cattle. Figure 2 brings out the comparative unimportance of milk for fluid consumption in several of the counties. Figure 3 shows the location of the cattle from which milk is sold for manufacturing use and Figure 4 shows the distribution of cattle from which butterfat is sold.

Table 9. Number of Dairy Farms and Number of Milk Cattle by Market Outlet
15 North Central Ohio Counties, 1942

| County | Producer | | Fluid to | | Fluid for | | Butterfat | | Not | | Total | |
|----------|-------------|--------|-------------|--------|-------------|--------|-----------|--------|------------|--------|-------|--------|
| | Distributor | | Distributor | | Manufacture | | | | Classified | | | |
| | Farm | Cattle | Farm | Cattle | Farm | Cattle | Farm | Cattle | Farm | Cattle | Farm | Cattle |
| Allen | 22 | 506 | 275 | 2714 | 740 | 6403 | 606 | 4711 | 154 | 862 | 1797 | 15196 |
| Ashland | 4 | 40 | 417 | 6128 | 285 | 2716 | 705 | 5632 | 81 | 476 | 1492 | 14992 |
| Auglaize | 7 | 145 | 183 | 2320 | 871 | 9007 | 409 | 4534 | 88 | 633 | 1558 | 16639 |
| Crawford | 11 | 321 | 297 | 4007 | 291 | 3429 | 1060 | 10229 | 18 | 178 | 1677 | 18164 |
| Hardin | 12 | 160 | 192 | 1388 | 889 | 8253 | 403 | 3100 | 98 | 535 | 1594 | 13436 |
| Huron | 33 | 362 | 414 | 5194 | 351 | 3085 | 700 | 4961 | 96 | 645 | 1594 | 14247 |
| Knox | 18 | 314 | 104 | 1811 | 778 | 8302 | 718 | 5840 | 68 | 441 | 1686 | 16708 |
| Logan | 29 | 383 | 75 | 1063 | 877 | 9608 | 440 | 3593 | 99 | 667 | 1520 | 15314 |
| Marion | 25 | 402 | 220 | 3131 | 454 | 5050 | 437 | 3735 | 74 | 402 | 1210 | 12720 |
| Mercer | 6 | 94 | 55 | 512 | 1522 | 14292 | 228 | 1861 | 53 | 352 | 1864 | 17111 |
| Morrow | 6 | 101 | 77 | 1142 | 449 | 4891 | 804 | 6341 | 21 | 136 | 1357 | 12611 |
| Richland | 35 | 554 | 399 | 5254 | 457 | 5153 | 804 | 6669 | 103 | 857 | 1798 | 18287 |
| Shelby | 26 | 325 | 171 | 2643 | 844 | 8879 | 426 | 3928 | 68 | 572 | 1535 | 16347 |
| Van Wert | 15 | 192 | 162 | 1395 | 1097 | 9037 | 315 | 2417 | 71 | 452 | 1660 | 13493 |
| Wyandot | 6 | 90 | 64 | 825 | 616 | 6419 | 709 | 5973 | 44 | 294 | 1439 | 13601 |
| Total | 255 | 3989 | 3105 | 39527 | 10521 | 104524 | 8764 | 73524 | 1136 | 7302 | 23781 | 228866 |

Table 10. Number of Dairy Farms and Milk Cattle, and Per cent of Each
by Market Outlet, 15 West Central Ohio Counties, 1942

| County | Total Number of Farms | Total Number of Milk Cattle | For Fluid Consumption | | Fluid for Manufacture | | Butterfat | | Not Classified | |
|----------|--------------------------------|--------------------------------------|--------------------------|----------------|--------------------------|----------------|--------------|----------------|-------------------|----------------|
| | | | Farm pet. | Cattle pet. | Farm pet. | Cattle pet. | Farm pet. | Cattle pet. | Farm pet. | Cattle pet. |
| Allen | 1797 | 15196 | 16.5 | 21.2 | 41.2 | 42.1 | 33.7 | 31.0 | 8.6 | 5.7 |
| Ashland | 1492 | 14992 | 28.2 | 41.1 | 19.1 | 18.1 | 47.3 | 37.6 | 5.4 | 3.2 |
| Auglaize | 1558 | 16639 | 12.2 | 14.8 | 55.9 | 54.1 | 26.3 | 27.3 | 5.6 | 3.8 |
| Crawford | 1677 | 18164 | 18.4 | 23.8 | 17.3 | 18.9 | 63.2 | 56.3 | 1.1 | 1.0 |
| Hardin | 1594 | 13436 | 12.8 | 11.5 | 55.8 | 61.4 | 25.3 | 23.1 | 6.1 | 4.0 |
| Huron | 1594 | 14247 | 28.1 | 39.0 | 22.0 | 21.7 | 43.9 | 34.8 | 6.0 | 4.5 |
| Knox | 1686 | 16708 | 7.3 | 12.7 | 46.1 | 49.7 | 42.6 | 55.0 | 4.0 | 2.6 |
| Logan | 1520 | 15314 | 6.8 | 9.4 | 57.7 | 62.7 | 29.0 | 23.5 | 6.5 | 4.4 |
| Marion | 1210 | 12720 | 20.3 | 27.8 | 37.5 | 39.7 | 36.1 | 29.3 | 6.1 | 3.2 |
| Mercer | 1864 | 17111 | 3.3 | 3.5 | 81.7 | 83.5 | 12.2 | 10.9 | 2.8 | 2.1 |
| Morrow | 1357 | 12611 | 6.1 | 9.8 | 33.1 | 38.8 | 59.3 | 50.3 | 1.5 | 1.1 |
| Richland | 1798 | 18287 | 24.1 | 31.7 | 25.5 | 28.2 | 44.7 | 36.5 | 5.7 | 3.6 |
| Shelby | 1535 | 16347 | 12.8 | 18.2 | 55.0 | 54.3 | 27.8 | 24.0 | 4.4 | 3.5 |
| Van Wert | 1660 | 13493 | 10.6 | 11.8 | 66.1 | 67.0 | 19.0 | 17.9 | 4.3 | 3.3 |
| Wyandot | 1439 | 13601 | 4.9 | 6.7 | 42.8 | 47.2 | 49.3 | 43.9 | 3.0 | 2.2 |
| Total | 23781 | 228866 | 14.1 | 19.0 | 44.2 | 45.7 | 36.9 | 32.1 | 4.8 | 3.2 |

Table 11. Number of Milk Cattle per Farm by Market Outlet
15 West Central Ohio Counties, 1942

| County | Producer Distributor | Fluid to Distributor | Fluid to Manufacture | Butterfat | Not Classified | Total |
|----------|-------------------------|-------------------------|-------------------------|-----------|-------------------|-------|
| Allen | 23.0 | 9.9 | 8.7 | 7.8 | 5.6 | 8.5 |
| Ashland | 10.0 | 14.7 | 9.5 | 8.0 | 5.9 | 10.0 |
| Auglaize | 20.7 | 12.7 | 10.3 | 11.1 | 7.2 | 10.7 |
| Crawford | 29.2 | 13.5 | 11.8 | 9.6 | 9.9 | 10.8 |
| Hardin | 13.3 | 7.2 | 9.3 | 7.7 | 5.5 | 8.4 |
| Huron | 11.0 | 12.5 | 8.8 | 7.1 | 6.7 | 8.9 |
| Knox | 17.4 | 17.4 | 10.7 | 8.1 | 6.5 | 9.9 |
| Logan | 13.2 | 14.2 | 11.0 | 8.2 | 6.7 | 10.1 |
| Marion | 16.1 | 14.2 | 11.1 | 8.5 | 5.4 | 10.5 |
| Mercer | 15.7 | 9.3 | 9.4 | 8.2 | 6.6 | 9.2 |
| Morrow | 16.8 | 14.8 | 10.9 | 7.9 | 6.5 | 9.3 |
| Richland | 15.8 | 13.2 | 11.3 | 8.3 | 6.4 | 10.2 |
| Shelby | 12.5 | 15.5 | 10.5 | 9.2 | 8.4 | 10.6 |
| Van Wert | 12.8 | 8.6 | 8.2 | 7.7 | 6.4 | 8.1 |
| Wyandot | 15.0 | 12.9 | 10.4 | 8.4 | 6.7 | 9.5 |
| Total | 15.6 | 12.7 | 9.9 | 8.4 | 6.4 | 9.6 |

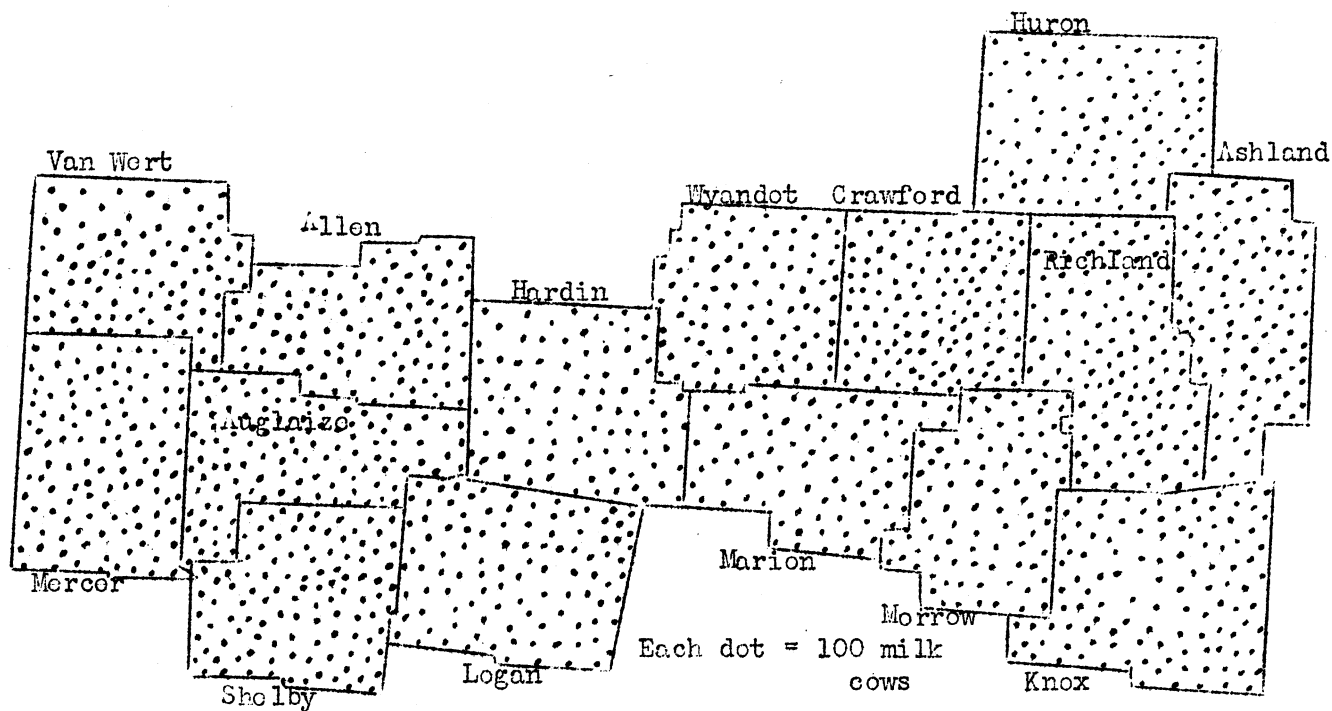


Figure 1. Cows Kept for Sale of All Dairy Products

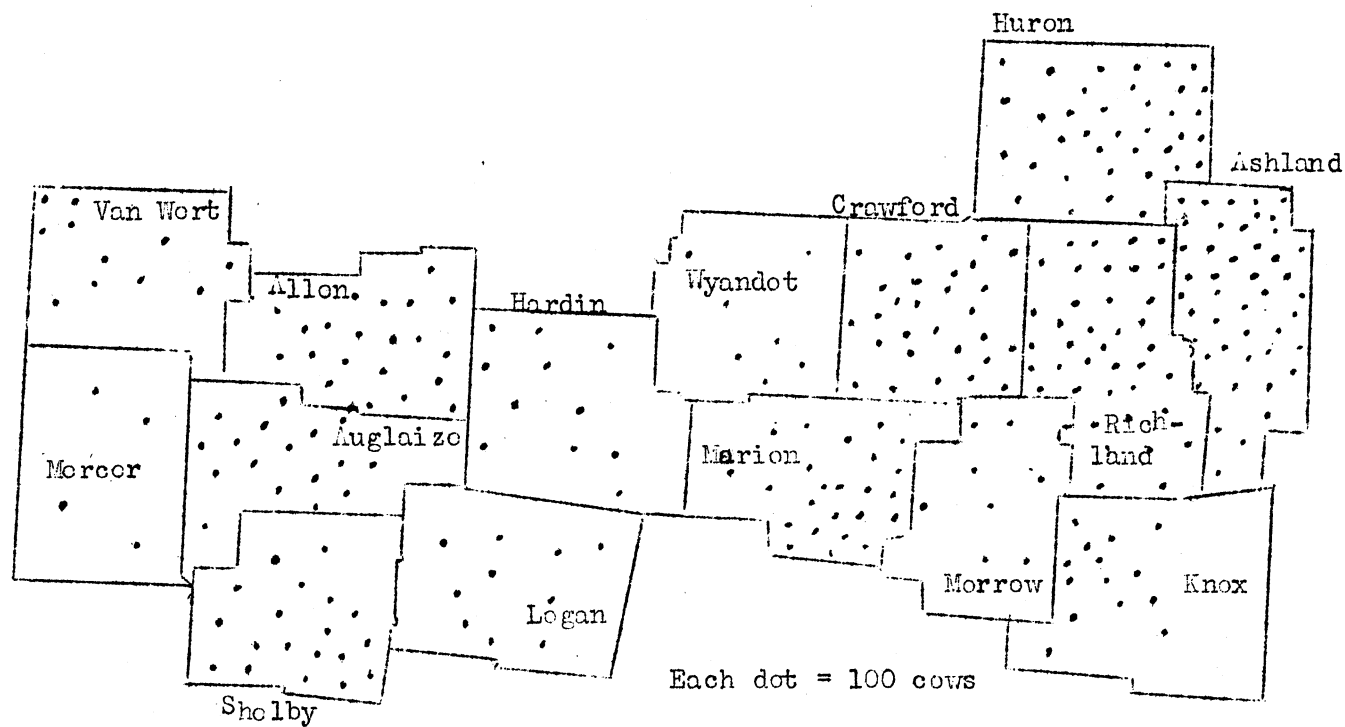


Figure 2. Cows Kept for Sale of Milk for Fluid Consumption

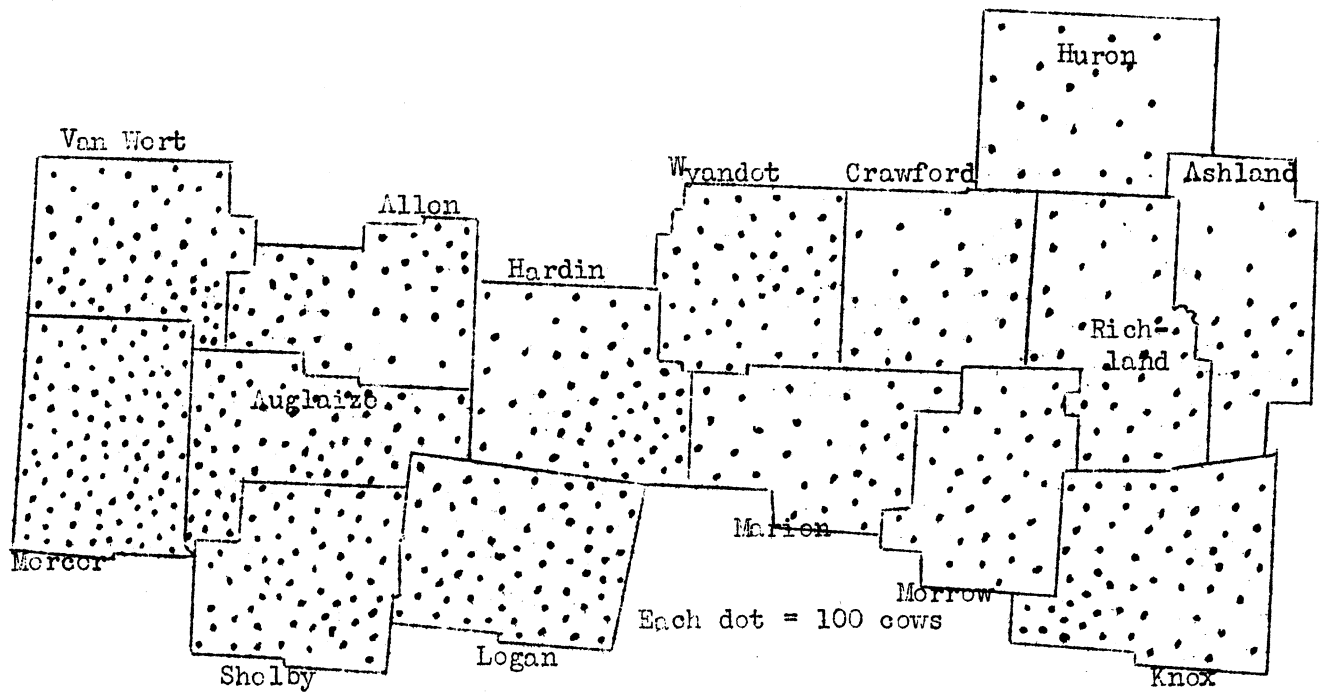


Figure 3. Cows Kept for Sale of Fluid Milk for Manufacture

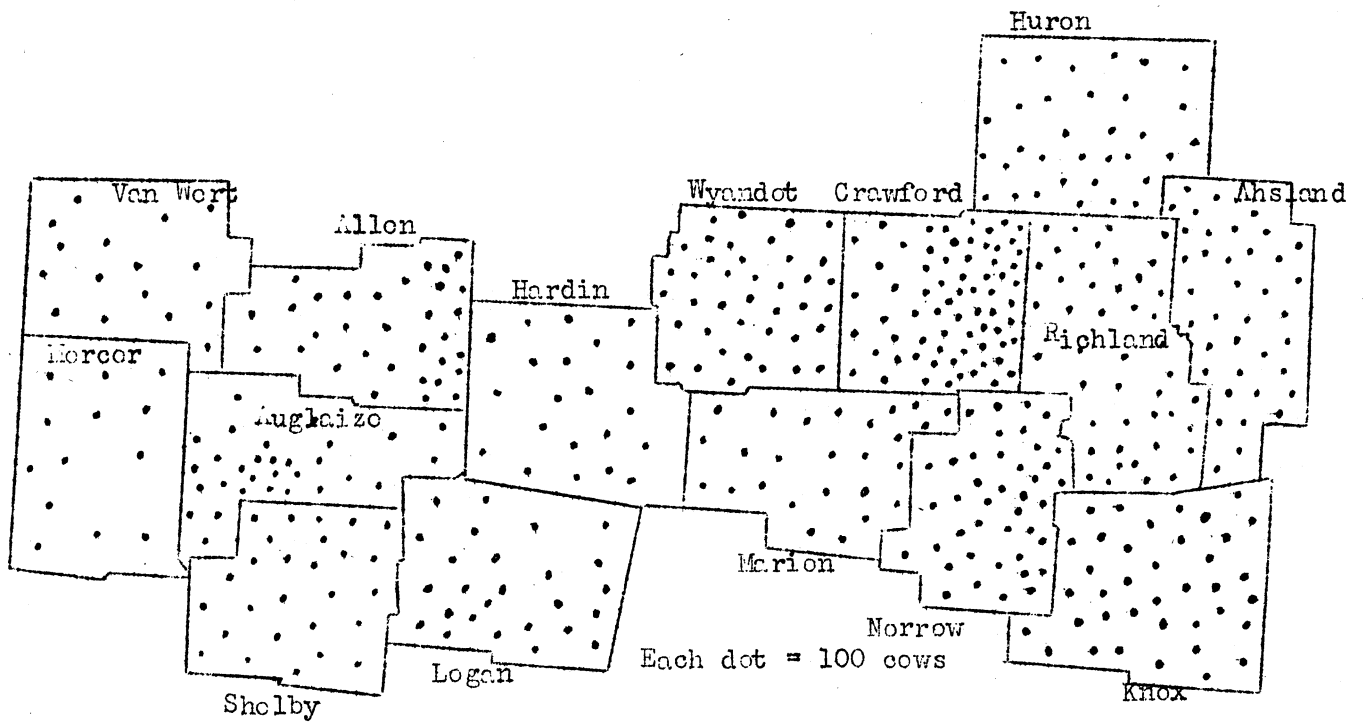


Figure 4. Cows Kept for Sale of Butterfat

Allen County

Slightly less than 300 farms in the survey were classified as fluid milk for fresh consumption. Milk for manufacture had the largest number of farms and by far the largest number of cattle. There were 5 townships in which there was heavy concentration of milk for manufacturing. They were Amanda, Marion, Monroe, Richland, and Spencer.

The county sold in 1939 dairy products to a value of \$524,633 as reported by the Census. There were 192 farms that listed dairy products as a major source of income. These dairy farms averaged \$754 income from sale of dairy products.

There were 65 producer distributors licensed in 1935 under the Burk Act. Of these, 9 were reported as operating in this survey and 13 additional names were added making a total of 22 in 1942.

The following dealers were licensed under House Bill 569 in 1942: Lima - Conestoga Cream & Cheese Manufacturing Company, Farmers Equity Union Creamery, Home Acre Dairy, Kolter-Buckeye Dairy Co., Sholley-Townsend, Inc., Service Dairy, Swift and Company, White Mountain Creamery Co. (Meadow Gold). Bluffton - Hy-Grade Dairy, Page Dairy Co. and Waldo Hofstetter. In addition to the above firms there were 14 cream stations under license.

The county was in a peculiar situation as to sanitary inspection. The City of Lima had a local ordinance and sanitarian. The White Mountain Creamery Company sold milk in the Indian Lake district and had a limited number of farms under inspection to produce Grade A milk. The Indian Lake district is under direct supervision of the State Department of Health.

Table 12. Number of Dairy Farms and Milk Cattle and Per cent of Each by Market Outlet, Allen County

| Township | Total Number of Farms | Total Number of Milk Cattle | For Fluid Consumption | | Fluid for Manufacture | | Butterfat | | Not Classified | |
|-------------|--------------------------------|--------------------------------------|--------------------------|----------------|--------------------------|----------------|--------------|----------------|-------------------|----------------|
| | | | Farm pet. | Cattle pet. | Farm pet. | Cattle pet. | Farm pet. | Cattle pet. | Farm pet. | Cattle pet. |
| Amanda | 126 | 1038 | 4.8 | 5.3 | 72.2 | 72.9 | 13.5 | 14.7 | 9.5 | 7.1 |
| American | 99 | 1008 | 43.5 | 60.2 | 22.2 | 17.6 | 34.3 | 22.2 | 0.0 | 0.0 |
| Auglaize | 169 | 1368 | 30.2 | 29.6 | 14.8 | 14.0 | 43.2 | 44.0 | 11.8 | 12.4 |
| Bath | 130 | 1120 | 24.6 | 28.1 | 36.9 | 42.9 | 23.9 | 19.5 | 14.6 | 9.5 |
| Jackson | 199 | 1804 | 13.6 | 18.8 | 30.7 | 31.2 | 51.2 | 47.7 | 4.5 | 2.3 |
| Marion | 198 | 1513 | 3.0 | 7.5 | 55.6 | 59.4 | 30.8 | 26.6 | 10.6 | 6.5 |
| Monroe | 196 | 1634 | 23.5 | 24.8 | 48.5 | 54.0 | 16.3 | 14.9 | 11.7 | 6.3 |
| Perry | 150 | 1222 | 33.3 | 41.2 | 8.0 | 8.3 | 48.0 | 44.2 | 10.7 | 6.3 |
| Richland | 221 | 1843 | 5.0 | 8.1 | 43.9 | 45.1 | 49.3 | 45.6 | 1.8 | 1.2 |
| Shawnee | 86 | 814 | 12.8 | 20.0 | 66.3 | 66.1 | 8.1 | 7.0 | 12.8 | 6.9 |
| Spencer | 104 | 779 | 1.0 | 1.0 | 74.0 | 75.0 | 9.6 | 11.4 | 15.4 | 12.6 |
| Sugar Creek | 119 | 1053 | 10.9 | 14.7 | 37.8 | 38.0 | 48.8 | 45.8 | 2.5 | 1.5 |
| County | 1797 | 15196 | 16.5 | 21.2 | 41.2 | 42.1 | 33.7 | 31.0 | 8.6 | 5.7 |

Ashland County

The sale of butterfat was the leading outlet in this county. The number of farms selling cream was equal to all other outlets combined. More than half of all the farms selling to milk distributors were located in the five townships of Clear Creek, Montgomery, Orange, Jackson and Sullivan. There was some concentration of sales for manufacturing in Vermillion, Mohican, Milton and Lake Townships.

The 1940 Census gave the value of dairy products sold in 1939 at \$602,276. There were 430 farms that reported dairy products as the chief source of income. These farms had an average of \$699 dairy income in 1939.

A pronounced change has taken place in the past 7 years with respect to sale of milk by producer-distributors. Under the Burk Act there were 52 licensed in 1935. Of these but two were reported in business at the time of the survey. Only two more were so reported, making a total of 4 for the county.

The following dealers were licensed in 1942 under House Bill 569: Ashland - Ashland Sanitary Dairy, Boyer Dairy Products Co., Emersons Dairy. Loudonville - Cottage Creamery Co. and Guernsey Dairy. Mohicanville - Carnation Milk Company. There were 9 cream stations licensed.

In sanitary control the county fell within a district with the central office in Mansfield. The district sanitary engineer exercised some supervision in the county but there was no county milk ordinance or sanitarian. There were some farms under Cleveland inspection.

Table 13. Number of Dairy Farms and Milk Cattle and Per cent of Each by Market Outlet, Ashland County

| Township | Total Number of Farms | Total Number of Milk Cattle | For Fluid Consumption | | Fluid for Manufacture | | Butterfat | | Not Classified | |
|-------------|--------------------------------|--------------------------------------|--------------------------|----------------|--------------------------|----------------|--------------|----------------|-------------------|----------------|
| | | | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. |
| Clear Creek | 110 | 1390 | 36.4 | 51.0 | 4.5 | 3.9 | 54.5 | 43.0 | 4.6 | 2.1 |
| Green | 129 | 1315 | 24.0 | 33.5 | 18.6 | 17.2 | 52.7 | 45.0 | 4.7 | 4.3 |
| Hanover | 62 | 455 | 4.8 | 10.0 | 11.3 | 10.6 | 80.6 | 77.4 | 3.3 | 2.0 |
| Jackson | 118 | 1108 | 35.6 | 51.1 | 18.6 | 18.6 | 30.0 | 27.3 | 6.8 | 3.0 |
| Lake | 76 | 694 | 4.0 | 8.8 | 51.3 | 51.4 | 44.7 | 39.8 | 0.0 | 0.0 |
| Mifflin | 43 | 359 | 4.7 | 8.4 | 4.7 | 3.3 | 76.7 | 72.7 | 13.9 | 15.6 |
| Milton | 94 | 917 | 22.4 | 27.2 | 37.2 | 40.8 | 37.2 | 39.0 | 3.2 | 2.0 |
| Mohican | 113 | 1121 | 21.2 | 29.2 | 31.0 | 34.4 | 43.4 | 34.2 | 4.4 | 2.2 |
| Montgomery | 132 | 1359 | 37.1 | 54.8 | 14.4 | 13.0 | 43.9 | 30.8 | 4.6 | 1.4 |
| Orange | 124 | 1359 | 35.5 | 51.2 | 6.5 | 5.5 | 54.8 | 42.4 | 3.2 | 0.9 |
| Perry | 121 | 1218 | 24.8 | 37.9 | 14.0 | 13.2 | 53.7 | 43.0 | 7.4 | 4.6 |
| Ruggles | 87 | 819 | 33.3 | 49.1 | 1.2 | 1.1 | 57.5 | 45.2 | 8.0 | 4.6 |
| Sullivan | 76 | 957 | 78.9 | 90.2 | 0.0 | 0.0 | 15.8 | 8.2 | 5.3 | 1.6 |
| Troy | 63 | 571 | 33.3 | 53.6 | 9.5 | 7.5 | 44.4 | 33.1 | 12.8 | 5.8 |
| Vermillion | 144 | 1350 | 15.3 | 19.8 | 45.1 | 43.6 | 34.0 | 32.2 | 5.6 | 4.4 |
| County | 1492 | 14992 | 28.2 | 41.1 | 19.1 | 18.1 | 47.3 | 37.6 | 5.4 | 3.2 |

Auglaize County

Milk from over half of the cows of this county was sold for fluid manufacturing use. In terms of total number of cows from which milk was sold for manufacturing, it ranks third to Mercer and Van Wert Counties.

According to the 1940 Census there were 238 farms with dairy products as the major source of income. Dairy products accounted for \$106,924 or 39.7 per cent of the income on those 238 farms with an average per farm from this source of \$449.26. The county as a whole had an income from dairy products of \$697,831.

In 1935 there were 30 producer-distributors licensed. In the survey only 7 were reported and but 2 of them were in the 1935 list.

In May, 1942 the following milk dealers were licensed under House Bill 569: Wapakoneta - Brown's Dairy, Decker's Dairy, Fisher Dairy & Cheese Co., St. Mary's - White Mountain Creamery. New Bremen - White Mountain Creamery. There were 7 cream stations under license.

No county or city ordinance for control of milk sanitation was in operation. Some farms were selling milk in the St. Mary's Lake district and these were under state supervision.

Table 14. Number of Dairy Farms and Milk Cattle and Per cent of Each by Market Outlet, Auglaize County

| Township | Total Number of Farms | Total Number of Milk Cattle | For Fluid Consumption | | Fluid For Manufacture | | Butterfat | | Not Classified | |
|---------------|--------------------------------|--------------------------------------|--------------------------|----------------|--------------------------|----------------|--------------|----------------|-------------------|----------------|
| | | | Farm p ct. | Cattle pct. | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. |
| Clay | 108 | 915 | 3.7 | 5.1 | 73.2 | 74.0 | 23.1 | 20.9 | 0.0 | 0.0 |
| Duchoquet | 164 | 1699 | 45.7 | 50.5 | 27.5 | 28.0 | 19.5 | 16.3 | 7.3 | 5.2 |
| German | 116 | 1131 | 0.0 | 0.0 | 74.1 | 70.5 | 25.9 | 29.5 | 0.0 | 0.0 |
| Goshon | 49 | 538 | 0.0 | 0.0 | 55.1 | 64.1 | 36.7 | 33.1 | 8.2 | 2.8 |
| Jackson | 96 | 1232 | 2.1 | 3.8 | 82.8 | 82.8 | 9.4 | 8.6 | 6.2 | 4.8 |
| Logan | 104 | 965 | 26.0 | 31.5 | 50.0 | 49.3 | 13.5 | 11.4 | 10.5 | 7.8 |
| Moulton | 102 | 1117 | 18.6 | 27.0 | 49.0 | 47.4 | 32.4 | 25.6 | 0.0 | 0.0 |
| Noble | 98 | 1178 | 30.6 | 36.6 | 54.1 | 51.7 | 15.3 | 11.7 | 0.0 | 0.0 |
| Pusheta | 149 | 1876 | 1.3 | 4.7 | 64.4 | 63.9 | 26.9 | 27.7 | 7.4 | 3.7 |
| Salem | 80 | 834 | 6.2 | 8.8 | 77.5 | 77.2 | 8.8 | 7.9 | 7.5 | 6.1 |
| St. Marys | 133 | 1542 | 6.0 | 8.3 | 39.8 | 39.0 | 44.4 | 46.0 | 9.8 | 6.7 |
| Union | 147 | 1084 | 8.9 | 12.0 | 76.9 | 77.7 | 5.4 | 4.8 | 8.8 | 5.5 |
| Washington | 138 | 1911 | 2.9 | 2.8 | 19.6 | 20.3 | 68.8 | 71.0 | 8.7 | 5.9 |
| Wayne | 74 | 617 | 1.4 | 1.0 | 66.2 | 65.3 | 32.4 | 33.7 | 0.0 | 0.0 |
| County | 1558 | 16639 | 12.2 | 14.8 | 55.9 | 54.1 | 26.3 | 27.3 | 5.6 | 3.8 |

Crawford County

This county was the highest of the 15 in number of farms and cows from which butterfat was sold. In 13 of the 16 townships over 50 per cent of farms with 3 or more cows sold butterfat.

According to the 1940 Census, there were 163 farms with dairy products as their major source of income with an average per farm of \$722.81. The total value of all dairy products sold for the county was \$470,594.

In 1935 there were 40 producer-distributors under license. Seven of these were reported as in business in this survey and 4 additional names were listed making a total for the county of 11 in 1942.

The following firms were licensed under House Bill 569 as milk dealers: Bucyrus - Bucyrus Cheese and Dairy Co., L. J. Durigg, Jersey Maid Dairy, Lone Pine Farms, Smooth-Kool Dairy Co., C. Warnock & Company. Crestline - Cloverdale Dairy, Grove Milk Company, Rooks Dairy and Sherer's Dairy. Galion - Andrews Dairy, Buckeye Dairy and Keller Dairy. There were 16 cream stations under license.

The U.S. Public Health Service standard ordinance went into effect in the county on February 1, 1942.

Table 15. Number of Dairy Farms and Milk Cattle and Per cent of Each by Market Outlet, Crawford County

| Township | Total Number of Farms | Total Number of Milk Cattle | For Fluid Consumption | | Fluid for Manufacture | | Butterfat | | Not Classified | |
|-----------|--------------------------------|--------------------------------------|--------------------------|----------------|--------------------------|----------------|--------------|----------------|-------------------|----------------|
| | | | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. |
| Auburn | 116 | 1122 | 7.8 | 10.3 | 12.9 | 15.8 | 79.3 | 73.9 | 0.0 | 0.0 |
| Bucyrus | 118 | 1356 | 30.5 | 43.0 | 15.3 | 14.2 | 52.5 | 41.4 | 1.7 | 1.4 |
| Chatfield | 121 | 1311 | 15.7 | 17.4 | 19.8 | 18.2 | 64.5 | 64.4 | 0.0 | 0.0 |
| Cranberry | 139 | 1388 | 31.7 | 38.2 | 0.0 | 0.0 | 66.2 | 60.2 | 2.1 | 1.6 |
| Dallas | 65 | 674 | 12.3 | 10.2 | 23.1 | 38.6 | 63.1 | 48.7 | 1.5 | 2.5 |
| Holmes | 158 | 1744 | 33.6 | 44.3 | 6.3 | 7.9 | 58.2 | 45.8 | 1.9 | 2.0 |
| Jackson | 41 | 498 | 29.3 | 46.8 | 39.0 | 31.7 | 31.7 | 21.5 | 0.0 | 0.0 |
| Jefferson | 105 | 1086 | 19.0 | 16.6 | 12.4 | 16.1 | 66.7 | 66.0 | 1.9 | 1.3 |
| Liberty | 159 | 1912 | 16.4 | 25.9 | 23.9 | 19.7 | 59.7 | 54.4 | 0.0 | 0.0 |
| Lykens | 108 | 937 | 10.2 | 12.6 | 13.0 | 14.9 | 76.8 | 72.5 | 0.0 | 0.0 |
| Polk | 65 | 910 | 20.0 | 38.2 | 0.0 | 0.0 | 80.0 | 61.8 | 0.0 | 0.0 |
| Sandusky | 78 | 700 | 15.4 | 21.6 | 23.1 | 20.6 | 61.5 | 57.8 | 0.0 | 0.0 |
| Texas | 42 | 413 | 11.9 | 11.9 | 57.1 | 61.7 | 31.0 | 26.4 | 0.0 | 0.0 |
| Todd | 83 | 681 | 39.8 | 39.8 | 13.2 | 14.1 | 47.0 | 46.1 | 0.0 | 0.0 |
| Vernon | 118 | 1287 | 0.9 | 0.8 | 27.1 | 35.4 | 72.0 | 63.8 | 0.0 | 0.0 |
| Whetstone | 161 | 2145 | 3.7 | 8.1 | 26.7 | 29.0 | 65.2 | 59.6 | 4.4 | 3.3 |
| County | 1677 | 18164 | 18.4 | 23.8 | 17.4 | 18.9 | 63.2 | 56.3 | 1.0 | 1.0 |

Hardin County

Of the dairy products sold in Hardin County almost two thirds was sold in fluid form for manufacture. In 10 of the 15 townships the milk from over half the cows was sold in this way. Milk for consumption in fluid form accounted for only 11.5% of the cows.

The 1940 Census reported 150 farms with dairy products as the main source of income. These farms had an average income from this source of \$533.77 for 1939. The total sales of dairy products for the county was \$566,623.

Hardin County had 50 producer-distributors licensed in 1935 under the Burk Act.. Of these 4 were reported as still in operation at the time of the survey and eight new ones were listed, making the 1942 total 12.

Under House Bill 569 in May, 1942 the following milk distributors were licensed Kenton - Cedar Lawn Dairy, City Dairy, Kenton Dunkirk Creamery Co. Ada: Ada Dairy. 17 cream stations were licensed.

There was no program of sanitary control or inspection in operation at the time of the survey.

Table 16. Number of Dairy Farms and Milk Cattle and Per cent of Each by Market Outlet, Hardin County

| Township | Total Number of Farms | Total Number of Milk Cattle | For Fluid Consumption | | Fluid for Manufacture | | Butterfat | | Not Classified | |
|--------------|--------------------------------|--------------------------------------|--------------------------|--------|--------------------------|--------|-----------|--------|-------------------|--------|
| | | | Farm | Cattle | Farm | Cattle | Farm | Cattle | Farm | Cattle |
| | | | pct. | pct. | pct. | pct. | pct. | pct. | pct. | pct. |
| Blanchard | 112 | 891 | 4.5 | 4.0 | 51.8 | 53.9 | 34.8 | 35.2 | 8.9 | 6.9 |
| Buck | 186 | 1379 | 40.3 | 22.8 | 37.6 | 55.3 | 21.0 | 18.6 | 1.1 | 3.3 |
| Cossna | 70 | 707 | 4.3 | 8.1 | 35.7 | 37.3 | 42.9 | 41.3 | 17.1 | 13.3 |
| Dudley | 125 | 1013 | 2.4 | 2.5 | 73.6 | 78.8 | 16.0 | 14.7 | 8.0 | 4.0 |
| Goshen | 103 | 859 | 0.0 | 0.0 | 86.4 | 90.0 | 10.7 | 7.4 | 2.9 | 2.6 |
| Hale | 99 | 745 | 19.2 | 20.8 | 54.5 | 57.9 | 20.2 | 18.5 | 6.1 | 2.8 |
| Jackson | 81 | 761 | 6.2 | 8.7 | 84.0 | 84.0 | 8.6 | 6.9 | 1.2 | 0.4 |
| Liberty | 151 | 1125 | 24.5 | 31.0 | 46.4 | 47.9 | 24.5 | 21.1 | 4.6 | 0.0 |
| Lynn | 68 | 640 | 0.0 | 0.0 | 55.9 | 58.6 | 33.8 | 34.7 | 10.3 | 6.7 |
| Marion | 75 | 558 | 33.3 | 43.9 | 48.0 | 45.9 | 8.0 | 5.6 | 10.7 | 4.6 |
| McDonald | 139 | 1161 | 0.0 | 0.0 | 54.7 | 63.8 | 41.0 | 34.6 | 4.3 | 1.6 |
| Pleasant | 120 | 1281 | 2.5 | 4.8 | 71.7 | 82.8 | 19.2 | 10.4 | 6.6 | 2.0 |
| Roundhead | 55 | 471 | 0.0 | 0.0 | 40.0 | 48.8 | 43.6 | 41.8 | 16.4 | 9.4 |
| Taylor Creek | 83 | 725 | 2.4 | 2.9 | 79.5 | 85.8 | 8.5 | 5.2 | 9.6 | 6.1 |
| Washington | 127 | 1120 | 21.3 | 20.3 | 30.7 | 26.6 | 47.2 | 51.9 | 0.8 | 1.2 |
| County | 1594 | 13436 | 12.8 | 11.5 | 55.8 | 61.4 | 25.3 | 23.1 | 6.1 | 4.0 |

Huron County

This county was second only to Ashland of this area in number of farms and cows from which milk was sold for fluid consumption. Cleveland draws heavily on milk from the eastern part and some from most of the other townships. The sale of butterfat still accounted for one third of the cows of the county. Such sales are especially heavy in south-western Huron County.

The 1940 Census reported 355 farms with dairy products as the major source of income with an average value of such products of \$768.69 per farm. Total value of dairy products sales for the county in 1939 was \$549,867.

Huron County had 53 producer-distributors licensed under the Burk Act. Of these 18 were reported as in business in 1942. New names listed in the survey brought the total to 33.

The following milk dealers were licensed in May, 1942 under House Bill 569: Norwalk - Bell's Dairy, Norwalk Pure Milk, Inc., Wrights Dairy. New London - Morris J. Lawrence, Upton Dairy, Willard - Willard Dairy, Square Deal Dairy. There were 7 cream stations under license.

The county was operating under the U.S. Public Health Service standard ordinance. A sanitarian was in charge.

Table 17. Number of Dairy Farms and Milk Cattle and Per cent of Each by Market Outlet, Huron County

| Township | Total Number of Farms | Total Number of Milk Cattle | For Fluid Consumption | | Fluid for Manufacture | | Butterfat | | Not Classified | |
|-------------|--------------------------------|--------------------------------------|--------------------------|----------------|--------------------------|----------------|--------------|----------------|-------------------|----------------|
| | | | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. |
| Bronson | 99 | 919 | 38.4 | 53.1 | 20.2 | 22.4 | 33.3 | 21.7 | 8.1 | 2.8 |
| Clarksfield | 84 | 844 | 55.9 | 77.4 | 2.4 | 3.0 | 40.5 | 18.7 | 1.2 | 0.9 |
| Fairfield | 89 | 878 | 24.7 | 35.9 | 16.9 | 16.1 | 55.0 | 46.2 | 3.4 | 1.8 |
| Fitchville | 84 | 686 | 27.4 | 41.7 | 8.3 | 10.3 | 64.3 | 48.0 | 0.0 | 0.0 |
| Greenwich | 78 | 631 | 14.1 | 18.8 | 35.9 | 44.4 | 47.3 | 35.2 | 2.6 | 1.6 |
| Hartland | 97 | 980 | 44.3 | 56.5 | 17.5 | 20.4 | 28.9 | 18.1 | 9.3 | 5.0 |
| Lyme | 79 | 723 | 38.0 | 49.9 | 27.8 | 23.8 | 32.9 | 25.3 | 1.5 | 1.0 |
| Greenfield | 52 | 441 | 28.9 | 47.5 | 11.5 | 12.5 | 59.6 | 40.0 | 0.0 | 0.0 |
| New Haven | 79 | 690 | 30.4 | 40.7 | 7.6 | 7.1 | 62.0 | 52.2 | 0.0 | 0.0 |
| New London | 67 | 667 | 50.7 | 61.2 | 0.0 | 0.0 | 46.3 | 36.6 | 3.0 | 2.2 |
| Norwalk | 85 | 613 | 41.2 | 57.1 | 15.3 | 16.5 | 34.1 | 22.3 | 9.4 | 4.1 |
| Norwich | 91 | 803 | 6.6 | 8.1 | 26.4 | 24.5 | 57.1 | 59.3 | 9.9 | 8.1 |
| Perud | 96 | 785 | 2.1 | 2.8 | 58.3 | 63.7 | 31.3 | 28.5 | 8.3 | 5.0 |
| Richmond | 90 | 758 | 5.6 | 5.1 | 36.7 | 39.6 | 44.4 | 41.6 | 13.3 | 13.7 |
| Ridgefield | 81 | 751 | 18.5 | 21.4 | 37.0 | 32.4 | 30.9 | 33.4 | 13.6 | 12.8 |
| Ripley | 106 | 959 | 19.8 | 30.7 | 27.4 | 23.8 | 50.9 | 44.7 | 1.9 | 0.8 |
| Sherman | 60 | 446 | 18.3 | 17.5 | 13.3 | 13.9 | 68.4 | 68.6 | 0.0 | 0.0 |
| Townsend | 98 | 754 | 23.4 | 34.6 | 33.7 | 31.5 | 32.7 | 26.5 | 10.2 | 7.4 |
| Wakeman | 79 | 919 | 53.2 | 66.5 | 2.5 | 1.9 | 31.6 | 18.4 | 12.7 | 13.2 |
| County | 1594 | 14247 | 28.0 | 38.9 | 22.0 | 21.7 | 43.9 | 34.8 | 6.1 | 4.6 |

Knox County

Knox County had only three townships from which over one fourth of the sales was for fluid consumption. Sale of milk for manufacturing use accounted for the milk from almost exactly one half of the cows. There was no large city market drawing milk from this county for fluid consumption.

According to the 1940 Census 368 farms obtained more income from the sale of dairy products than from any other source. These farms had an average income from this source of \$784.91 per farm for 1939. The total value of all dairy products sold for that year was \$649,016 for the entire county.

In 1935 there were 31 producer-distributors under license, 8 of which were in operation in 1942. Those reporting listed 10 new names making a total of 18.

In 1942 there were 4 dealers licensed under House Bill 569. They were located as follows: Jewell Ice Cream and Milk Company and the South Vernon Milk Company at Mt. Vernon; Fredericktown Ice and Dairy Company at Fredericktown and Purdy and Clutter Dairy at Gambier. 16 cream stations were also under license at this time.

No program of sanitary control or farm inspection was in effect in the county.

Table 18. Number of Dairy Farms and Milk Cattle and Per cent of Each by Market Outlet, Knox County

| Township | Total Number of Farms | Total Number of Milk Cattle | For Fluid Consumption | | Fluid for Manufacture | | Butterfat | | Not Classified | |
|-----------------------|--------------------------------|--------------------------------------|--------------------------|----------------|--------------------------|----------------|--------------|----------------|-------------------|----------------|
| | | | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. |
| Borlin | 85 | 859 | 2.4 | 5.4 | 35.3 | 36.6 | 58.8 | 54.5 | 3.5 | 3.5 |
| Brown | 93 | 830 | 4.3 | 4.8 | 38.7 | 41.0 | 48.4 | 46.4 | 8.6 | 7.8 |
| Butler | 69 | 517 | 0.0 | 0.0 | 33.3 | 38.5 | 65.2 | 60.9 | 1.5 | 0.6 |
| Clay | 82 | 690 | 2.4 | 1.9 | 41.5 | 50.7 | 53.7 | 45.5 | 2.4 | 1.9 |
| Clinton | 72 | 901 | 36.1 | 57.2 | 22.2 | 19.3 | 38.9 | 22.5 | 2.8 | 1.0 |
| College & Pleasant | 87 | 866 | 13.8 | 19.2 | 18.4 | 26.4 | 57.5 | 46.5 | 10.3 | 7.9 |
| Harrison | 89 | 798 | 4.5 | 7.8 | 46.1 | 49.6 | 49.4 | 42.6 | 0.0 | 0.0 |
| Hilliar | 93 | 1145 | 8.6 | 10.5 | 54.0 | 56.7 | 32.0 | 31.0 | 5.4 | 1.8 |
| Howard | 68 | 669 | 1.5 | 1.8 | 70.6 | 74.4 | 27.9 | 23.8 | 0.0 | 0.0 |
| Jackson | 69 | 444 | 2.9 | 2.3 | 55.1 | 51.6 | 40.6 | 45.0 | 1.4 | 1.1 |
| Jefferson | 82 | 657 | 0.0 | 0.0 | 32.9 | 35.8 | 63.4 | 60.7 | 3.7 | 3.5 |
| Liberty | 75 | 894 | 6.7 | 11.0 | 44.0 | 50.8 | 46.6 | 37.1 | 2.7 | 1.1 |
| Middlebury | 70 | 765 | 7.1 | 14.3 | 54.3 | 59.0 | 37.2 | 26.1 | 1.4 | 0.6 |
| Milford | 91 | 955 | 1.1 | 0.9 | 70.3 | 70.7 | 26.4 | 24.6 | 2.2 | 3.8 |
| Miller | 81 | 929 | 1.2 | 4.2 | 74.1 | 82.0 | 16.0 | 10.7 | 8.7 | 3.1 |
| Monroe | 90 | 824 | 7.8 | 17.0 | 27.8 | 30.8 | 56.6 | 48.1 | 7.8 | 4.1 |
| Morgan | 56 | 506 | 12.5 | 11.7 | 39.3 | 47.4 | 41.1 | 33.4 | 7.1 | 7.5 |
| Morris | 88 | 943 | 18.2 | 28.1 | 42.0 | 44.1 | 34.1 | 25.1 | 5.7 | 2.7 |
| Pike | 83 | 806 | 4.8 | 11.8 | 54.2 | 52.2 | 41.0 | 36.0 | 0.0 | 0.0 |
| Union | 69 | 673 | 2.9 | 5.2 | 72.5 | 77.3 | 20.3 | 15.2 | 4.3 | 2.3 |
| Wayne | 94 | 12037 | 13.8 | 28.2 | 47.9 | 47.8 | 35.1 | 23.0 | 3.2 | 1.0 |
| County | 1686 | 16708 | 7.3 | 12.7 | 46.1 | 49.7 | 42.6 | 35.0 | 4.0 | 2.6 |

Logan County

The sale of milk for fluid consumption accounted for the milk from only 104 farms or 6.8 per cent of the farms with 3 or more dairy cows. Milk for manufacturing use was by far the dominant outlet for the county.

The 1940 Census reported 430 farms with dairy products as their major source of income. The average sales value of dairy products for these 430 farms was \$664.97 in 1939. The total value of dairy products sold in 1939 for Logan County was \$778,024.

There were 63 producer-distributors licensed in 1935 under the Burk Act. Of these 9 were reported in the survey and 20 additional names were listed giving the county a total of 29.

The following dealers were licensed under House Bill 569 in April, 1942: Bellefontaine - Farmers Equity Union Creamery Co., Hopewell Dairy, Hillcrest Dairy, Moores and Ross, Startzman Dairy Company. DeGraff - DeGraff Creamery. Belle Center, Belle Center Creamery & Cheese Company. West Liberty - Borden's. Mansfield - Pearl McDonald. There were at this time 22 cream stations under license.

In sanitary controls the county was closely tied in to the program of Indian Lake district under state supervision. The U.S. Public Health Service standard ordinance was in effect.

Table 19. Number of Dairy Farms and Milk Cattle and Per cent of Each by Market Outlet, Logan County

| Township | Total Number of Farms | Total Number of Milk Cattle | For Fluid Consumption | | Fluid for Manufacture | | Butterfat | | Not Classified | |
|-------------|--------------------------------|--------------------------------------|--------------------------|----------------|--------------------------|----------------|--------------|----------------|-------------------|----------------|
| | | | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. |
| Bloomfield | 57 | 558 | 0.0 | 0.0 | 82.4 | 82.3 | 12.3 | 13.6 | 5.3 | 4.1 |
| Bokes Creek | 141 | 1425 | 9.9 | 15.1 | 65.3 | 67.2 | 22.0 | 15.2 | 2.8 | 2.5 |
| Harrison | 96 | 943 | 8.3 | 10.9 | 61.5 | 63.9 | 21.9 | 21.6 | 8.3 | 3.6 |
| Jefferson | 118 | 1299 | 9.3 | 15.2 | 38.2 | 48.2 | 41.5 | 31.2 | 11.0 | 5.4 |
| Lake | 50 | 513 | 32.0 | 37.0 | 24.0 | 28.1 | 38.0 | 32.4 | 6.0 | 2.5 |
| Liberty | 93 | 886 | 12.9 | 19.8 | 30.1 | 34.0 | 36.6 | 33.6 | 20.4 | 12.6 |
| McArthur | 63 | 807 | 6.3 | 12.3 | 61.9 | 65.4 | 31.8 | 22.3 | 0.0 | 0.0 |
| Miami | 78 | 674 | 5.1 | 5.2 | 52.6 | 59.7 | 28.2 | 21.5 | 14.1 | 13.6 |
| Monroe | 130 | 1381 | 3.1 | 8.9 | 50.0 | 57.2 | 42.3 | 30.7 | 4.6 | 3.2 |
| Perry | 83 | 838 | 3.6 | 2.1 | 82.0 | 89.7 | 10.8 | 5.5 | 3.6 | 2.7 |
| Pleasant | 75 | 760 | 0.0 | 0.0 | 70.7 | 76.3 | 20.0 | 16.5 | 9.3 | 7.2 |
| Richland | 69 | 576 | 10.1 | 8.5 | 52.2 | 52.3 | 37.7 | 39.2 | 0.0 | 0.0 |
| Rushcreek | 118 | 1136 | 4.2 | 3.8 | 82.2 | 85.5 | 12.7 | 10.3 | 0.9 | 0.4 |
| Stokes | 118 | 1089 | 3.4 | 4.0 | 76.3 | 80.8 | 18.6 | 14.0 | 1.7 | 1.2 |
| Union | 112 | 1259 | 4.5 | 7.1 | 42.8 | 49.6 | 41.1 | 33.6 | 11.6 | 9.7 |
| Washington | 46 | 439 | 6.5 | 8.2 | 39.1 | 50.8 | 41.3 | 35.1 | 13.1 | 5.9 |
| Zane | 73 | 731 | 5.5 | 4.1 | 53.4 | 63.9 | 41.1 | 32.0 | 0.0 | 0.0 |
| County | 1520 | 15314 | 6.8 | 9.4 | 57.7 | 62.7 | 29.0 | 23.5 | 6.5 | 4.4 |

Marion County

Manufacturing of fluid milk provided the outlet for the milk from about 40 per cent of the cows in this county while the remaining 60 per cent was about evenly divided between milk for fluid consumption and butterfat.

According to the 1940 Census, 156 farms obtained the major portion of their income from the sale of dairy products. The average value of dairy products sold from these 156 farms was \$855.67 for 1939. For that year the total sales of dairy products from Marion County amounted to \$480,415.

Marion is one of the very few counties that has shown more producer distributors in the survey than were licensed under the Burk Act. The records show 17 producer-distributors under license in 1935 and in this survey 25 were reported. Of these only 5 were included in the 1935 list.

The following dealers had been licensed in April 1942 under the new milk control law: Marion - Ideal Dairy, Isaly Dairy Company, Moores & Ross, Parish Dairy Co., Harvey W. Zackman. Prospect - Prospect Dairy. 10 cream stations were licensed.

Marion County at one time adopted the U.S. Public Health Service standard ordinance and later dropped it. The City of Marion was operating under an adequate ordinance which was well enforced. The county had no program of milk inspection.

Table 20. Number of Dairy Farms and Milk Cattle and Per cent of Each by Market Outlet, Marion County

| Township | Total Number of Farms | Total Number of Milk Cattle | For Fluid Consumption | | Fluid for Manufacture | | Butterfat | | Not Classified | |
|---------------|--------------------------------|--------------------------------------|--------------------------|----------------|--------------------------|----------------|--------------|----------------|-------------------|----------------|
| | | | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. |
| Big Island | 109 | 1048 | 10.1 | 16.3 | 48.6 | 49.5 | 34.9 | 31.0 | 6.4 | 3.2 |
| Bowling Green | 80 | 850 | 1.2 | 2.5 | 46.2 | 54.4 | 43.8 | 36.9 | 8.8 | 6.2 |
| Claridon | 104 | 1216 | 40.4 | 57.3 | 20.2 | 20.3 | 32.7 | 19.2 | 6.7 | 3.2 |
| Grand | 49 | 406 | 2.0 | 1.5 | 67.4 | 68.7 | 30.6 | 29.8 | 0.0 | 0.0 |
| Grand Prairie | 55 | 516 | 25.5 | 37.6 | 25.4 | 21.3 | 40.0 | 34.9 | 9.1 | 6.2 |
| Green Camp | 85 | 595 | 17.6 | 16.5 | 45.9 | 55.8 | 31.8 | 24.5 | 4.7 | 3.2 |
| Marion | 79 | 1144 | 41.8 | 49.7 | 26.6 | 28.8 | 22.8 | 19.0 | 8.9 | 2.5 |
| Montgomery | 78 | 848 | 6.4 | 8.8 | 50.0 | 53.1 | 30.8 | 28.1 | 12.8 | 10.0 |
| Pleasant | 92 | 1184 | 40.2 | 56.5 | 32.6 | 26.4 | 21.8 | 15.4 | 5.4 | 1.7 |
| Prospect | 83 | 787 | 28.9 | 35.3 | 43.4 | 46.3 | 16.9 | 13.3 | 10.8 | 5.1 |
| Richland | 136 | 1334 | 17.6 | 21.4 | 43.4 | 48.3 | 34.6 | 28.9 | 4.4 | 1.4 |
| Salt Rock | 52 | 585 | 15.4 | 18.5 | 30.8 | 37.6 | 53.8 | 43.9 | 0.0 | 0.0 |
| Scott | 55 | 574 | 29.1 | 37.1 | 10.9 | 13.4 | 58.2 | 48.6 | 1.8 | 0.9 |
| Tully | 71 | 908 | 0.0 | 0.0 | 31.0 | 44.9 | 69.0 | 55.1 | 0.0 | 0.0 |
| Waldo | 82 | 725 | 17.1 | 20.6 | 34.1 | 40.8 | 41.5 | 34.8 | 7.3 | 3.8 |
| County | 1210 | 12720 | 20.3 | 27.8 | 37.5 | 39.7 | 36.1 | 29.4 | 6.1 | 3.1 |

Mercer County

This county led all of the others of this area in number of cows and per cent of cows from which milk was sold for manufacturing. Six townships in this county had less than 1 per cent of sales from the farm for fluid consumption. In no township was less than 70 per cent of the milk sold for manufacturing.

The 1940 Census reported 243 farms which obtained the major portion of their income from the sale of dairy products. The average sales of dairy products for these 243 farms was \$466.73 for 1939. For the year the total income from such sales was \$852,856, the highest for any county of this area.

There were 38 producer-distributors licensed in 1935. Of these five were reported as in business in the survey and only 1 additional name was added making a total of 6 for 1942.

In April of 1942 there were the following dealers under license: Fort Recovery - Farmers Equity Union Creamery Co., Mrs. E. C. Granger, Shively Dairy. Rockford - Ramey's Home Dairy. Celina - L. C. Garman Dairy, Producers Creamery and Cold Storage Company. Coldwater - Pot Milk Company. There were 4 cream stations licensed at the time.

Mercer County like Logan is closely connected with the supervision by the state of its park districts. St. Marys Lake district is in Mercer County and Celina is within the district. The inspection of the milk supply by these authorities extends well over the county.

Table 21. Number of Dairy Farms and Milk Cattle and Per cent of Each by Market Outlet, Mercer County

| Township | Total Number of Farms | Total Number of Milk Cattle | For Fluid Consumption | | Fluid for Manufacture | | Butterfat | | Not Classified | |
|-------------|--------------------------------|--------------------------------------|--------------------------|----------------|--------------------------|----------------|--------------|----------------|-------------------|----------------|
| | | | Farm pet. | Cattle pet. | Farm pet. | Cattle pet. | Farm pet. | Cattle pet. | Farm pet. | Cattle pet. |
| Black Creek | 140 | 1308 | 0.7 | 0.7 | 78.6 | 84.4 | 9.3 | 8.0 | 11.4 | 6.9 |
| Butler | 159 | 1413 | 1.9 | 3.3 | 94.3 | 94.1 | 3.2 | 2.2 | 0.6 | 0.4 |
| Center | 154 | 1085 | 9.8 | 13.4 | 74.0 | 73.2 | 8.4 | 8.4 | 7.8 | 5.0 |
| Dublin | 105 | 777 | 0.9 | 2.7 | 81.0 | 78.9 | 18.1 | 18.4 | 0.0 | 0.0 |
| Franklin | 76 | 735 | 0.0 | 0.0 | 81.6 | 83.7 | 18.4 | 16.3 | 0.0 | 0.0 |
| Gibson | 88 | 795 | 8.0 | 8.9 | 71.6 | 70.3 | 17.0 | 15.9 | 3.4 | 4.9 |
| Granville | 149 | 1690 | 0.7 | 0.8 | 87.9 | 89.8 | 11.4 | 9.4 | 0.0 | 0.0 |
| Hopewell | 139 | 1162 | 1.4 | 1.2 | 76.3 | 78.1 | 22.3 | 20.7 | 0.0 | 0.0 |
| Jofferson | 100 | 809 | 8.0 | 8.3 | 86.0 | 87.1 | 2.0 | 1.9 | 4.0 | 2.7 |
| Liberty | 126 | 1179 | 0.8 | 0.2 | 95.2 | 94.4 | 3.2 | 5.0 | 0.8 | 0.4 |
| Marion | 205 | 2396 | 7.8 | 6.6 | 78.1 | 81.7 | 7.8 | 6.8 | 6.3 | 4.9 |
| Recovery | 124 | 1218 | 0.0 | 0.0 | 82.3 | 85.6 | 17.7 | 14.4 | 0.0 | 0.0 |
| Union | 147 | 1231 | 4.1 | 4.5 | 74.2 | 80.4 | 19.7 | 13.6 | 2.0 | 1.5 |
| Washington | 152 | 1313 | 0.0 | 0.0 | 81.6 | 79.5 | 18.4 | 20.5 | 0.0 | 0.0 |
| County | 1864 | 17111 | 3.3 | 3.5 | 81.6 | 83.5 | 12.3 | 10.9 | 2.8 | 2.1 |

Morrow County

Morrow County was one of the two counties in which the sale of butterfat accounted for the milk from over 50 per cent of the cows. Crawford was the other. In four townships the sale of milk for manufacture accounted for more cows than did butterfat while in the other 12 butterfat predominated.

According to the 1940 Census 286 farms obtained more income from the sale of dairy products than from any other source. The average value of such sales per farm for 1939 was \$632.44 while the total value of all dairy products sold for the county was \$451,118.

There were 23 producer-distributors licensed in 1935 and but 1 of these was reported in the survey. 5 additional names were added to make a total of 6 for the county in 1942.

The dealers licensed under House Bill 569 in April 1942 were Cox Dairy and Morrow Creamery Company at Mt. Gilead and Metcalf's Dairy, Galion. There were 15 cream stations licensed under this law.

The U.S. Public Health Service standard ordinance is in operation. A full time sanitarian is in charge of dairy inspection.

Table 22. Number of Dairy Farms and Milk Cattle and Per cent of Each by Market Outlet, Morrow County

| Township | Total Number of Farms | Total Number of Milk Cattle | For Fluid Consumption | | Fluid for Manufacture | | Butterfat | | Not Classified | |
|----------------|--------------------------------|--------------------------------------|--------------------------|----------------|--------------------------|----------------|--------------|----------------|-------------------|----------------|
| | | | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. |
| Bennington | 76 | 846 | 2.6 | 2.1 | 50.0 | 68.3 | 44.8 | 27.6 | 2.6 | 2.0 |
| Canaan | 81 | 761 | 7.4 | 11.2 | 42.0 | 40.6 | 50.6 | 48.2 | 0.0 | 0.0 |
| Cardington | 88 | 946 | 3.4 | 8.7 | 63.6 | 73.6 | 30.7 | 17.0 | 2.3 | 0.7 |
| Chester | 87 | 847 | 8.0 | 15.4 | 10.4 | 13.1 | 75.9 | 65.2 | 5.7 | 6.3 |
| Congress | 1126 | 1115 | 1.6 | 4.7 | 13.5 | 17.9 | 84.9 | 77.4 | 0.0 | 0.0 |
| Franklin | 80 | 912 | 6.2 | 3.4 | 36.3 | 31.6 | 57.5 | 65.0 | 0.0 | 0.0 |
| Gilead | 102 | 932 | 3.9 | 7.8 | 34.3 | 42.7 | 55.9 | 47.1 | 5.9 | 2.4 |
| Harmony | 77 | 583 | 7.8 | 12.2 | 20.8 | 26.1 | 71.4 | 61.7 | 0.0 | 0.0 |
| Lincoln | 84 | 704 | 1.2 | 5.9 | 36.9 | 42.6 | 61.9 | 51.6 | 0.0 | 0.0 |
| No. Bloomfield | 99 | 963 | 9.1 | 13.6 | 22.2 | 28.9 | 68.7 | 57.5 | 0.0 | 0.0 |
| Perry | 86 | 785 | 10.5 | 14.5 | 22.1 | 25.9 | 62.8 | 56.4 | 4.6 | 3.2 |
| Peru | 66 | 474 | 0.0 | 0.0 | 34.9 | 44.7 | 62.1 | 53.0 | 3.0 | 2.3 |
| So. Bloomfield | 83 | 701 | 1.2 | 2.0 | 28.9 | 37.8 | 69.9 | 60.2 | 0.0 | 0.0 |
| Troy | 54 | 504 | 1.8 | 1.0 | 63.0 | 71.4 | 35.2 | 27.6 | 0.0 | 0.0 |
| Washington | 87 | 809 | 17.2 | 36.0 | 36.8 | 20.5 | 46.0 | 43.5 | 0.0 | 0.0 |
| Westfield | 81 | 729 | 14.8 | 14.3 | 37.0 | 51.7 | 48.2 | 34.0 | 0.0 | 0.0 |
| County | 1357 | 12611 | 6.1 | 9.8 | 33.1 | 38.8 | 59.3 | 50.3 | 1.5 | 1.1 |

Richland County

This county had almost an even division of cows into the three milk outlets, with butterfat accounting for slightly more than either of the two other outlets.

The 1940 Census reported 394 farms with dairy products as their major source of income. These 394 farms had an average income per farm from this source in 1939 of \$797.48. The total income from dairy products for the county in that year was \$628,217.

Richland County had 58 producer-distributors under license in 1935. Of these 13 were found to be in business in 1942 and 22 new names were added giving the county a total of 35 in 1942.

The following dealers were licensed in April, 1942 under the provisions of House Bill 569: Mansfield - Axtell's Dairy Products, Isaly Dairy Company, Levering Dairy Co., Page Dairy Co., Rowland Dairy, Wilson Dairy, Shelby - North Central Farm Bureau Coop. Assn., Shelby Pure Milk Co., Walker's Dairy, Belleville - Carnation Company, and Shiloh - Robert F. Lofland. There were 8 cream stations licensed at this time.

Morrow County is operating under the U.S. Public Health Service standard ordinance with an adequate staff for inspection.

Table 23. Number of Dairy Farms and Milk Cattle and Per cent of Each by Market Outlet, Richland County

| Township | Total Number of Farms | Total Number of Milk Cattle | For Fluid Consumption | | Fluid for Manufacture | | Butterfat | | Not Classified | |
|----------------|--------------------------------|--------------------------------------|--------------------------|----------------|--------------------------|----------------|--------------|----------------|-------------------|----------------|
| | | | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. |
| Blooming Grove | 92 | 816 | 13.1 | 20.5 | 23.9 | 33.0 | 58.7 | 42.5 | 4.3 | 4.0 |
| Butler | 98 | 1057 | 39.8 | 52.6 | 24.5 | 21.7 | 29.6 | 23.3 | 6.1 | 2.4 |
| Cass | 116 | 1162 | 28.4 | 38.5 | 12.1 | 11.0 | 55.2 | 47.6 | 4.3 | 3.2 |
| Franklin | 99 | 998 | 37.4 | 46.5 | 8.1 | 8.7 | 54.5 | 44.8 | 0.0 | 0.0 |
| Jackson | 105 | 999 | 42.9 | 49.2 | 14.2 | 13.3 | 42.9 | 37.5 | 0.0 | 0.0 |
| Jefferson | 130 | 1249 | 2.3 | 5.6 | 30.8 | 40.8 | 60.8 | 49.3 | 6.1 | 4.3 |
| Madison | 70 | 733 | 70.0 | 83.5 | 0.0 | 0.0 | 21.4 | 13.8 | 8.6 | 2.7 |
| Mifflin | 74 | 857 | 18.9 | 21.2 | 32.4 | 42.4 | 44.6 | 33.8 | 4.1 | 2.6 |
| Monroe | 130 | 1120 | 14.6 | 19.8 | 30.0 | 34.4 | 46.9 | 39.4 | 8.5 | 6.4 |
| Perry | 69 | 718 | 1.4 | 2.7 | 40.6 | 47.1 | 46.4 | 42.3 | 11.6 | 7.9 |
| Plymouth | 93 | 945 | 12.9 | 16.0 | 23.7 | 31.1 | 58.0 | 47.5 | 5.4 | 5.4 |
| Sandusky | 61 | 636 | 19.7 | 30.6 | 44.3 | 42.0 | 26.2 | 18.6 | 9.8 | 8.8 |
| Sharon | 109 | 1140 | 31.2 | 38.6 | 16.5 | 17.0 | 42.2 | 35.4 | 10.1 | 9.0 |
| Springfield | 141 | 1484 | 27.0 | 38.6 | 47.5 | 48.5 | 14.9 | 9.4 | 10.6 | 3.5 |
| Troy | 59 | 911 | 10.2 | 8.9 | 59.3 | 50.0 | 22.0 | 37.8 | 8.5 | 3.3 |
| Washington | 165 | 1697 | 21.1 | 33.3 | 15.7 | 17.7 | 34.3 | 26.6 | 28.9 | 22.4 |
| Weller | 73 | 741 | 39.7 | 49.4 | 12.3 | 10.5 | 48.0 | 40.1 | 0.0 | 0.0 |
| Worthington | 114 | 1024 | 8.8 | 11.9 | 20.2 | 23.1 | 68.4 | 62.8 | 2.6 | 2.2 |
| County | 1798 | 18287 | 24.1 | 31.8 | 25.4 | 28.2 | 44.7 | 36.4 | 5.7 | 3.6 |

Shelby County

The milk sold from slightly over half the cows of this county goes through manufacturing channels. In only 3 townships was milk for fluid consumption or butterfat the leading outlet.

The 1940 Census reported 303 farms with dairy products as the major source of income. The average per farm of these 303 farms for 1939 was \$606.78. For the entire county the income from the sale of dairy products for 1939 was \$699,648.

This county shares with Marion the distinction of having had more producer-distributors reported in the survey than were licensed in 1935. Under the Burk Act there were 16 licensed. Of these 7 were operating in 1942 and 19 additional farms were listed making a total of 26 in 1942, an increase of 10 over 1935.

The following firms were licensed under House Bill 569 in April 1942: Sidney - Shelby Farm Dairy, Sidney Dairy Products Co., Russel Dairy. Piqua - Forsythe Dairy, Jackson Center - Jackson Center Creamery Co. Anna - Sidney Dairy Products Co. There were 5 cream stations under license.

Shelby County and Sidney jointly operate under the U.S. Public Health Service standard ordinance. Lake Laramie, under state inspection, is in this county.

Table 24. Number of Dairy Farms and Milk Cattle and Per cent of Each
by Market Outlet, Shelby County

| Township | Total Number of Farms | Total Number of Milk Cattle | For Fluid Consumption | | Fluid For Manufacture | | Butterfat | | Not Classified | |
|--------------|--------------------------------|--------------------------------------|--------------------------|----------------|--------------------------|----------------|--------------|----------------|-------------------|----------------|
| | | | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. |
| Clinton | 51 | 773 | 43.1 | 58.1 | 19.6 | 18.2 | 29.4 | 18.0 | 7.9 | 5.7 |
| Cynthian | 105 | 887 | 19.1 | 25.7 | 49.5 | 48.8 | 19.0 | 15.7 | 12.4 | 9.8 |
| Dinsmore | 163 | 1667 | 11.7 | 11.3 | 42.3 | 42.1 | 45.4 | 45.7 | 0.6 | 0.9 |
| Franklin | 82 | 850 | 13.4 | 22.2 | 62.2 | 60.2 | 22.0 | 15.9 | 2.4 | 1.7 |
| Green | 86 | 1129 | 31.3 | 37.7 | 65.1 | 60.4 | 3.6 | 1.9 | 0.0 | 0.0 |
| Jackson | 115 | 980 | 2.6 | 1.6 | 60.0 | 60.4 | 27.0 | 29.1 | 10.4 | 8.9 |
| Loramie | 178 | 1605 | 5.0 | 10.8 | 55.1 | 55.4 | 39.9 | 33.8 | 0.0 | 0.0 |
| McLean | 156 | 1708 | 7.1 | 8.5 | 63.5 | 69.0 | 17.9 | 14.1 | 11.5 | 8.4 |
| Orange | 73 | 841 | 31.5 | 42.2 | 34.3 | 29.1 | 34.2 | 28.7 | 0.0 | 0.0 |
| Perry | 120 | 1249 | 5.0 | 6.3 | 71.7 | 76.1 | 23.3 | 17.6 | 0.0 | 0.0 |
| Salem | 80 | 769 | 1.2 | 2.2 | 75.0 | 80.2 | 21.3 | 15.2 | 2.5 | 2.4 |
| Turtle Creek | 94 | 1079 | 7.4 | 16.1 | 76.6 | 69.2 | 16.0 | 17.7 | 0.0 | 0.0 |
| Van Buren | 155 | 1798 | 10.3 | 9.4 | 43.9 | 46.3 | 39.4 | 38.8 | 6.4 | 5.5 |
| Washington | 77 | 1012 | 28.6 | 35.3 | 37.6 | 35.5 | 26.0 | 22.9 | 7.8 | 6.3 |
| County | 1535 | 16347 | 12.8 | 18.2 | 55.0 | 54.3 | 27.8 | 24.0 | 4.4 | 3.5 |

Van Wert County

In all but two townships of Van Wert County the milk from over 50 per cent of the cows was sold for manufacturing use. This outlet accounted for 67 per cent of the farm sales of dairy products of this county.

According to the 1940 Census there were 155 farms with dairy products as the major source of income with an average income from this source of \$467.39. For the entire county the sale of dairy products amounted to \$557,608.

There were 39 producer-distributors licensed under the Burk Act. Of these 6 were in business in 1942 and 9 new names were added in the survey making a total of 15.

The firms licensed as dealers under House Bill 569 in April 1942 were as follows: Van Wert - Borden Cheese Co., Brookside Dairy, Cloverdale Dairy, Globe dairy J. E. Gribler Dairy, Shaffer's Dairy. Delphos - Lincoln-Highway Dairy. There were 8 cream stations licensed at this time.

There was no program in effect to establish sanitary regulations.

Table 25. Number of Dairy Farms and Milk Cattle and Per cent of Each by Market Outlet, Van Wert County

| Township | Total Number of Farms | Total Number of Milk Cattle | For Fluid Consumption | | Fluid for Manufacture | | Butterfat | | Not Classified | |
|------------|--------------------------------|--------------------------------------|--------------------------|----------------|--------------------------|----------------|--------------|----------------|-------------------|----------------|
| | | | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. |
| Harrison | 172 | 1481 | 2:3 | 3:8 | 54:7 | 52:1 | 34:9 | 37:1 | 8:1 | 7:0 |
| Hoaglin | 112 | 742 | 2:7 | 3:9 | 64:3 | 64:4 | 20:5 | 22:5 | 12:5 | 9:2 |
| Jackson | 101 | 746 | 0:0 | 0:0 | 85:1 | 86:9 | 14:9 | 13:1 | 0:0 | 0:0 |
| Jennings | 134 | 1227 | 1:5 | 2:4 | 78:4 | 83:0 | 20:1 | 14:6 | 0:0 | 0:0 |
| Liberty | 159 | 1446 | 5:0 | 4:8 | 76:1 | 79:3 | 18:9 | 15:9 | 0:0 | 0:0 |
| Pleasant | 156 | 1319 | 14:7 | 19:5 | 54:5 | 55:6 | 21:2 | 19:2 | 9:6 | 5:7 |
| Ridge | 100 | 828 | 12:0 | 17:9 | 65:0 | 68:4 | 16:0 | 8:9 | 7:0 | 4:8 |
| Tully | 154 | 1111 | 48:1 | 51:9 | 16:2 | 19:1 | 35:1 | 28:3 | 0:6 | 0:7 |
| Union | 143 | 849 | 0:0 | 0:0 | 99:3 | 98:8 | 0:7 | 1:2 | 0:0 | 0:0 |
| Washington | 154 | 1213 | 27:9 | 30:5 | 63:0 | 60:8 | 5:2 | 5:4 | 3:9 | 3:3 |
| Willshire | 140 | 1352 | 4:3 | 3:0 | 65:0 | 64:2 | 20:7 | 24:1 | 10:0 | 8:7 |
| York | 135 | 1179 | 1:5 | 0:8 | 84:4 | 86:3 | 14:1 | 12:9 | 0:0 | 0:0 |
| County | 1660 | 13493 | 10:6 | 11:8 | 66:1 | 67:0 | 19:0 | 17:9 | 4:3 | 3:3 |

Wyandot County

Milk was sold from 70 farms in Wyandot County for fluid consumption. This represented only about 6.7 per cent of the cows. The milk from the remainder of the cows was about evenly divided between butterfat and milk for manufacture.

The 1940 Census reported 91 farms with an average value of dairy products for 1939 of \$648.58 as the major source of income. The total value of dairy products sold for 1939 was \$408,557.

There were 26 producer-distributors licensed under the Burk Act in 1935. Only two of these were reported as in business in 1942. Four additional farms were listed in the survey making a total of 6 for the county.

Four firms were under license in April 1942 under House Bill 569. They were all in Upper Sandusky. Chief Dairy Products Co., Kinley's Dairy, Miller Dairy and Upper Sandusky Dairy. There were 21 cream stations licensed.

The U.S. Public Health Service Standard ordinance was in operation and a strong program of inspection was maintained.

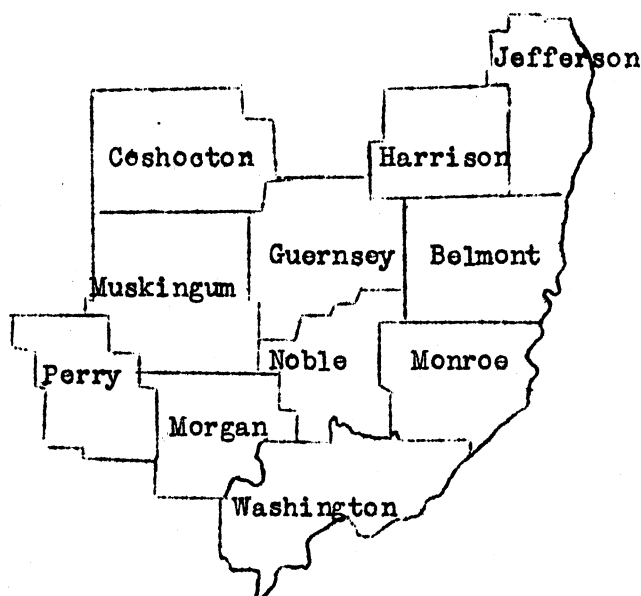
Table 26. Number of Dairy Farms and Milk Cattle and Per cent of Each by Market Outlet, Wyandot County

| Township | Total Number of Farms | Total Number of Milk Cattle | For Fluid Consumption | | Fluid for Manufacture | | Butterfat | | Not Classified | |
|-----------|--------------------------------|--------------------------------------|--------------------------|----------------|--------------------------|----------------|--------------|----------------|-------------------|----------------|
| | | | Farm pet. | Cattle pet. | Farm pet. | Cattle pet. | Farm pet. | Cattle pet. | Farm pet. | Cattle pet. |
| Antrim | 94 | 851 | 5.3 | 4.7 | 24.5 | 32.6 | 57.4 | 57.2 | 12.8 | 5.5 |
| Crane | 145 | 1600 | 10.4 | 16.8 | 47.6 | 45.3 | 37.2 | 33.9 | 4.8 | 4.0 |
| Crawford | 132 | 1430 | 0.0 | 0.0 | 38.6 | 46.5 | 61.4 | 53.5 | 0.0 | 0.0 |
| Eden | 138 | 1152 | 0.7 | 0.7 | 61.6 | 66.9 | 34.3 | 30.1 | 2.9 | 2.3 |
| Jackson | 120 | 1098 | 0.0 | 0.0 | 49.2 | 56.6 | 45.8 | 40.6 | 5.0 | 2.8 |
| Marcellus | 54 | 483 | 1.9 | 5.0 | 51.8 | 52.6 | 46.3 | 42.4 | 0.0 | 0.0 |
| Mifflin | 111 | 1349 | 2.7 | 1.2 | 49.6 | 59.8 | 45.9 | 38.0 | 1.8 | 1.0 |
| Pitt | 104 | 796 | 10.6 | 11.0 | 26.0 | 32.7 | 56.7 | 50.4 | 6.7 | 5.9 |
| Richland | 129 | 974 | 3.9 | 6.6 | 32.6 | 36.1 | 62.0 | 55.9 | 1.5 | 1.4 |
| Ridgo | 47 | 418 | 23.4 | 36.1 | 14.9 | 11.0 | 61.7 | 52.9 | 0.0 | 0.0 |
| Salem | 157 | 1630 | 7.6 | 9.1 | 37.6 | 43.2 | 54.2 | 47.3 | 0.6 | 0.4 |
| Sycamore | 93 | 759 | 6.5 | 14.2 | 53.8 | 49.3 | 36.5 | 31.1 | 3.2 | 5.4 |
| Tymochtee | 115 | 1061 | 0.0 | 0.0 | 53.0 | 53.4 | 47.0 | 46.6 | 0.0 | 0.0 |
| County | 1439 | 13601 | 4.9 | 6.7 | 42.8 | 47.2 | 49.3 | 43.9 | 3.0 | 2.2 |

FARM SALES OF MILK THROUGH DIFFERENT OUTLETS

VII. South Eastern Ohio Area: Belmont, Coshocton, Guernsey,
Harrison, Jefferson, Monroe, Morgan, Muskingum,
Noble, Perry and Washington Counties

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Ohio State University
and
Ohio Agricultural Experiment Station

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Columbus, Ohio
June, 1942

FARM SALES OF MILK THROUGH DIFFERENT OUTLETS

VII. SOUTH EASTERN OHIO AREA: Belmont, Coshocton, Guernsey, Harrison, Jefferson, Monroe, Morgan, Muskingum, Noble Perry and Washington Counties

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| Monroe County | 17 |
| Morgan County | 18 |
| Muskingum County | 19 |
| Noble County | 20 |
| Perry County | 21 |
| Washington County | 22 |

FARM SALES OF MILK THROUGH DIFFERENT OUTLETS

VII. South Eastern Ohio Area: Belmont, Coshocton, Guernsey, Harrison, Jefferson, Monroe, Morgan, Muskingum, Noble, Perry and Washington Counties

C. G. McBride and R. W. Sherman

Sources of Data

This study, the seventh of a series, is based upon a survey of all farms with three or more dairy cattle at the time of the last test for tuberculosis conducted by the U.S. Bureau of Animal Industry and the Ohio Department of Agriculture. The records were obtained through the cooperation of those authorities and agricultural extension agents in charge of the records in the counties.

A list of herd owners was arranged by townships. Several copies of each list were made and these were mailed to a carefully selected group of key men, well distributed in each township. Each recipient of a list was asked to check the disposition of milk from each farm on which he had this information. When a producer was selling both to a city milk dealer and to a manufacturing outlet, he was recorded in the city milk dealer outlet.

When the checked sheets were returned the reports for each township were combined and in most cases it was found that a practically complete record had been obtained. In a few townships, the returns were not full enough to constitute a satisfactory record and other contacts were made in these townships in order to complete the data. A very high percentage of those who received lists cooperated by returning them promptly. Without this generous response on the part of those who were asked to assist, this survey would not have been possible. The cost in time and money of personal visitation to every township would have been prohibitive.

Limitations of the Study

Some difficulties were encountered in obtaining the information from the testing records. Some herds designated as mixed breeds undoubtedly were in whole or part beef cattle, but there was no way to determine the exact number. In areas surrounding the cities, there were many farms with 3 or 4 cattle tested. Replies indicated that many of these were kept primarily for home use but in some cases a small amount of milk or butterfat might be sold at certain times. Those who reported often lacked accurate information as to disposal of dairy products on such farms.

Some farmers had moved out of the township between the time of the test and the survey, but this factor was in large measure adjusted by the addition

1 Area I comprised Delaware, Fairfield, Franklin, Licking, Madison, Pickaway and Union Counties. Area II, Carroll, Columbiana, Holmes, Medina, Portago, Stark, Summit, Tuscarawas and Wayne Counties. Area III, Defiance, Fulton, Hancock, Henry, Lucas, Ottawa, Paulding, Putnam, Sandusky, Seneca, Williams and Wood Counties. Area IV, Butler, Champaign, Clark, Clermont, Clinton, Darke, Greene, Hamilton, Miami, Montgomery, Preble and Warren Counties. Area V, Adams, Athens, Brown, Fayette, Gallia, Highland, Hocking, Jackson, Lawrence, Meigs, Pike, Ross, Scioto and Vinton Counties. Area VI, Allen, Ashland, Auglaize, Crawford, Hardin, Huron, Logan, Mercer, Morrow, Richland, Shelby and Van Wert Counties.

of new names by those reporting. In a very few cases, where all attempts to obtain a complete record left too large a percentage of farms unclassified, some adjustments were made, based on the records of adjacent townships with approximately the same conditions. Despite the limitations described above, it is believed that the study presents a dependable picture of the disposal of milk from the farms of the area.

Type of Farming

This 11 county area is low in crop yields per acre compared with the state as a whole. In corn the 1939 average for the area is 46.4 bushels compared with 50 for the state. Coshooton County with 53 bushels was the only one that equaled the state average. In wheat the area average was 16.5 bushels as compared with 19.5 for the state. Jefferson with 20 bushels average was the only county that attained the state average. In hay the average yield of the area was 1.24 tons and for the state 1.32 tons. The area as a whole does not produce its dairy feed requirements.

In Table 1 is given the four most important sources of cash farm income for each of the counties. Dairy, poultry and sheep are the three leading sources and dairy products hold first place in all counties but Morgan, Belmont and Jefferson Counties stand out with 57% each.

Table 1. Important Sources and Percentages of Total Cash Farm Income Contributed by, and Rank of Each
11 Southeastern Ohio Counties, 1934 - 1938 Average*

| County | Total Cash Farm Income | Rank of Sources of Income and Their Relative Importance | | | | | | | |
|------------|------------------------|---|---------------|---------|---------------|---------|---------------|--------|---------------|
| | | | Pct. of Total | | Pct. of Total | | Pct. of Total | | Pct. of Total |
| Belmont | \$2,470,000 | DAIRY | 57 | Poultry | 15 | Cattle | 6 | Fruit | 6 |
| Coshooton | 2,492,000 | DAIRY | 30 | Sheep | 15 | Poultry | 15 | Hogs | 12 |
| Guernsey | 1,739,000 | DAIRY | 45 | Poultry | 18 | Cattle | 11 | Sheep | 13 |
| Harrison | 1,386,000 | DAIRY | 41 | Sheep | 23 | Poultry | 15 | Cattle | 8 |
| Jefferson | 1,165,000 | DAIRY | 57 | Poultry | 17 | Fruit | 7 | Sheep | 6 |
| Monroe | 1,429,000 | DAIRY | 45 | Poultry | 27 | Cattle | 7 | Hogs | 6 |
| Morgan | 1,365,000 | Poultry | 28 | DAIRY | 28 | Sheep | 20 | Cattle | 11 |
| Muskingum | 2,426,000 | DAIRY | 35 | Poultry | 15 | Sheep | 13 | Cattle | 9 |
| Noble | 1,380,000 | DAIRY | 38 | Poultry | 22 | Sheep | 14 | Cattle | 13 |
| Perry | 1,502,000 | DAIRY | 31 | Poultry | 19 | Hogs | 14 | Cattle | 9 |
| Washington | 2,205,000 | DAIRY | 32 | Poultry | 18 | Cattle | 10 | Truck | 8 |
| Total | 19,559,000 | DAIRY | 40 | Poultry | 18 | Sheep | 11 | Cattle | 10 |

* Derived from estimates of Gross Farm Cash Income as published by Dept of Rural Economics of Ohio State University and Ohio Agricultural Experiment Station, 1934 - 1938.

Roads

Movement of milk and cream into different market outlets is influenced to a great extent by the type of highway available. The only means of transportation used in marketing milk and cream in this area in 1941 was the motor truck.

The public road mileage of these 11 counties as of January 1, 1941 classified into hard surface, gravel and earth, is given in Table 2. Compared with the other areas studied, this area has the second highest percentage of earth road mileage, 3928 miles or 29.6 per cent in the total of 13,288 miles. The Dayton Cincinnati area had 3 per cent of earth roads. The percentage of gravel roads is relatively high in this area. This, however, has little influence upon the movement of milk to market since gravel as well as hard surface roads are usable for milk trucks every day in the year.

Table 2. Public Road Mileage of the Area by Types and by Counties as of January 1, 1941

| County | Hard Surface | | Gravel | | Earth | | Total Miles |
|------------|--------------|------|--------|------|--------|------|-------------|
| | Miles | Pct. | Miles | Pct. | Miles | Pct. | |
| Belmont | 282.1 | 18.1 | 889.2 | 57.0 | 388.2 | 24.9 | 1,559.5 |
| Coshocton | 73.0 | 5.9 | 1015.6 | 82.7 | 140.0 | 11.4 | 1,228.6 |
| Guernsey | 114.5 | 9.8 | 750.4 | 64.1 | 305.7 | 26.1 | 1,170.6 |
| Harrison | 142.9 | 15.2 | 591.2 | 62.8 | 207.1 | 22.0 | 941.2 |
| Jefferson | 328.3 | 29.7 | 581.3 | 52.6 | 195.0 | 17.7 | 1,104.6 |
| Monroe | 44.7 | 3.3 | 763.3 | 55.8 | 559.8 | 40.9 | 1,367.8 |
| Morgan | 53.9 | 5.2 | 715.0 | 68.7 | 271.6 | 26.1 | 1,040.5 |
| Muskingum | 162.7 | 12.1 | 932.4 | 69.2 | 251.9 | 18.7 | 1,347.0 |
| Noble | 131.6 | 12.7 | 429.1 | 41.3 | 478.6 | 46.0 | 1,039.3 |
| Perry | 78.3 | 7.2 | 453.3 | 41.6 | 557.7 | 51.2 | 1,089.3 |
| Washington | 135.7 | 9.7 | 691.9 | 49.4 | 572.3 | 40.9 | 1,399.9 |
| Total | 1547.7 | 11.6 | 7812.7 | 58.8 | 3927.9 | 29.6 | 13,288.3 |

Comparison of Study Data with Census and Crop and Livestock Reports

The United States Census and the Federal-State Cooperative Crop and Livestock Reporting Service have a listing of milk cattle as "cows and heifers, 2 years old and over". This classification can be used to compare with the data collected for this study as shown in Table 3.

For five of the first six areas factors were used to convert the number of cattle tested in the last tuberculosis test to number of milk cows. This was done by taking several hundred farms for which records were available both for number of milk cattle tested for tuberculosis and actual number of milk cows in the herds. This percentage relation was applied for all herds in the area as an estimate of the number of milk cows on the farms included in the study. In this area no identical farm figures were available for obtaining a conversion factor. A conversion factor was obtained for each county as follows. First the number of cows as reported by Census was used to adjust the total number of cattle tested for tuberculosis to the number of cows. Then the number of cows was raised by the average relation existing in the other areas which had a conversion factor to correct for the omissions of 1 and 2 cow herds. These conversion factors when reduced to one figure were as follows: Belmont, 66.7, Coshocton, 67.0, Guernsey, 67.0, Harrison, 65.2, Jefferson, 55.0, Monroe, 63.1, Morgan, 55.3, Muskingum, 56.7, Noble, 52.1, Perry, 55.1 and Washington, 56.7.

Most farms of this area have mixed herds which is indicated by the fact that the number of cattle per farm in the study is slightly more than double the number of milk cows per farm according to the Census. The area had 4.9 cows per farm compared to 5.3 for the state as reported by the 1940 Census.

Table 3. Number of Cows and Heifers, 2 Years Old and Over, Number of Milk Cows, Number of Cows Milked per Farm and Number of Cattle and Milk Cows per Farm in the Study, by Counties

| County | Milk cows and heifers 2 yrs. old & over, Crop & Livestock esti- mates, 1942 | Milk cows in study* | Cows per ** farm 1940 Census | All cattle per farm in study | Cows only* per farm in study |
|-------------|--|------------------------|------------------------------------|------------------------------------|------------------------------------|
| Belmont | 18,200 | 15,391 | 6.3 | 12.3 | 8.2 |
| Coshocton | 12,800 | 11,649 | 5.7 | 11.1 | 7.5 |
| Gaernsey | 13,500 | 12,191 | 5.4 | 10.6 | 7.1 |
| Harrison | 9,400 | 7,287 | 5.5 | 11.0 | 7.2 |
| Jefferson | 7,900 | 5,794 | 4.8 | 11.4 | 6.3 |
| Monroe | 11,400 | 12,712 | 4.4 | 9.1 | 5.7 |
| Morgan | 7,200 | 6,301 | 3.9 | 9.2 | 5.1 |
| Muskingum | 13,800 | 10,772 | 4.7 | 10.8 | 6.1 |
| Noble | 9,400 | 8,738 | 4.4 | 11.0 | 5.8 |
| Perry | 7,900 | 7,167 | 4.4 | 10.4 | 5.7 |
| Washington | 12,900 | 10,301 | 4.0 | 9.2 | 5.2 |
| 12 Counties | 124,400 | 108,803 | 4.9 | 10.5 | 6.4 |
| State | 1,073,000 | XXXX | 5.3 | XXX | XXX |

* Conversion factor explained in text

** Cows and heifers 2 years old and over kept mainly for milk production, 1940

In Table 4 is listed the number of farms selling milk and butterfat for 1939, according to the 1940 Census of milk disposed of in 1939 in the form of fluid milk or butterfat in this area, approximately 53 percent was sold in fluid form and 47 percent as butterfat. This study revealed that the milk from approximately 55 per cent of the cows was sold in fluid form in the early part of 1942 indicating a continued trend from butterfat to fluid milk sales. Since 1929 there has been an increase of 1587 farms selling whole milk according to the Census. In the same time there was a decrease of 873 farms selling butterfat. For Coshocton County the increase in farms selling whole milk was from 253 to 884 according to the Census. This study showed 949 farms with 3 or more cows selling milk in fluid form in early 1942.

The difference in the number of farms selling through the different channels according to the Census and as reported by this study is due to two factors. First, the Census was for the year 1939 while this study was for early 1942. Second, the study excluded farms with one and two cows.

Table 4. Sales of Whole Milk and Butterfat and Number of Farms Reporting Each, by County, 1939

| County | Farms report- ing whole milk sold (number) | Annual sales of whole milk per farm reporting (gallons) | Farms report- ing cream sold as butterfat (number) | Annual sales of butterfat per farm (pounds) |
|-------------|---|--|---|--|
| Belmont | 989 | 4,286.8 | 898 | 619.3 |
| Coshocton | 884 | 3,267.0 | 856 | 494.9 |
| Guernsey | 631 | 2,594.1 | 1,138 | 543.7 |
| Harrison | 395 | 3,599.8 | 794 | 531.0 |
| Jefferson | 466 | 3,423.9 | 277 | 494.8 |
| Monroe | 325 | 2,879.6 | 1,515 | 411.6 |
| Morgan | 355 | 2,095.9 | 970 | 388.3 |
| Muskingum | 598 | 3,123.7 | 1,315 | 545.8 |
| Noble | 211 | 2,505.5 | 1,459 | 455.0 |
| Perry | 417 | 2,354.6 | 753 | 481.1 |
| Washington | 551 | 2,418.5 | 1,522 | 407.0 |
| 12 Counties | 5,822 | 3,121.4 | 11,507 | 480.1 |

Source: 1940 Census of Agriculture, First Series, Ohio

The relation population of this area to number of milk cows was practically the same in 1940 as it had been in 1900. Both the population and the number of milk cows increased in the 40 year period. The most notable increases in population were in Belmont and Jefferson Counties. Belmont also had the largest increase in number of cows. For the eleven counties as a whole the number of cows was about three times as many as necessary to supply the area itself with milk for fluid consumption if all production was available for such use. These figures are shown by individual counties in Table 5.

Table 5. Number of Dairy Cows Compared with Total Population in Counties of the Area, 1900 and 1940

| County | 1900 | | | 1940 | | |
|------------|----------------|---------------------|----------------------------|----------------|---------------------|----------------------------|
| | Dairy Cows* | Total Population | Cows per 100 Population | Dairy Cows* | Total Population | Cows per 100 Population |
| Belmont | 11,322 | 60,875 | 19.4 | 16,403 | 95,624 | 17.2 |
| Coshocton | 8,349 | 29,337 | 30.2 | 11,463 | 30,594 | 37.5 |
| Guernsey | 8,548 | 34,425 | 24.8 | 12,117 | 38,822 | 31.2 |
| Harrison | 6,763 | 20,486 | 33.0 | 8,044 | 20,313 | 39.6 |
| Jefferson | 7,725 | 44,357 | 17.4 | 6,918 | 98,129 | 7.0 |
| Monroe | 9,590 | 27,031 | 35.5 | 10,012 | 18,641 | 53.7 |
| Morgan | 6,534 | 17,905 | 35.4 | 6,693 | 14,227 | 47.0 |
| Muskingum | 11,226 | 53,185 | 21.1 | 12,052 | 69,795 | 17.3 |
| Noble | 6,747 | 19,466 | 34.7 | 8,404 | 14,587 | 57.6 |
| Perry | 8,229 | 31,841 | 19.6 | 7,295 | 31,087 | 22.9 |
| Washington | 10,541 | 48,245 | 21.8 | 11,623 | 43,537 | 26.7 |
| Total | 94,374 | 387,153 | 24.4 | 111,024 | 475,346 | 23.4 |

Source: U.S. Census of Population and of Agriculture, 1900 and 1940

* Cows & heifers two years old and over kept mainly for milk production, 1939

Changes in Market Outlets, 1903 to 1942

One of the first records of a systematic survey of outlets for milk and butterfat from Ohio Farms is found in the annual report of the Ohio Dairymen's Association for 1903. ¹ Professor J. W. Decker of Ohio State University compiled this directory of butter and cheese factories and milk skimming and shipping stations. The totals for the state were: butter factories, 148; skimming stations, 77; milk shipping stations, 22; American cheese factories, 114; Swiss cheese factories, 92. The report did not include milk distributors who purchased from farmers nor producer-distributors who sold milk at retail.

This area in 1903 had in all 8 creameries and 8 Swiss cheese factories. The creameries were in Guernsey, Harrison, Morgan, Muskingum and Washington Counties. All of the 8 cheese factories were in the three northeastern townships of Coshocton County, Adams, Crawford and White Eyes.

A survey of sources of market milk and butterfat in Ohio was made in 1931 by McBride and Cowden ². In this survey the location of manufacturing plants was given. At this time the United Dairies plant at Barnesville was the only evaporating plant in the area. There were a few cheese factories in Coshocton and Monroe Counties. The churning points listed in 1931 were Caldwell, Clarington, Coshocton, Hannibal, McConnellsville, Marietta, Powhatan Point and Quaker City.

In the 10 years intervening to the time of this study some changes had taken place. The Carnation Company plant at Coshocton was built and had developed an area including about half of the counties in the area. There was also an increase in cheese factories. In Table 6 is given the plants engaged wholly or largely in manufacturing dairy products as reported for 1941.

Table 6. Dairy Plants in Area in 1941*
(excluding those engaged only in Milk Distribution)

| County | Butter | Cheese | Evaporated Milk | Combination | Total |
|------------|--------|--------|-----------------|-------------|-------|
| Belmont | 2 | - | 1 | 4 | 7 |
| Coshocton | - | 5 | 1 | - | 6 |
| Guernsey | 1 | - | - | 3 | 4 |
| Harrison | 1 | 1 | - | - | 2 |
| Jefferson | - | - | - | 2 | 2 |
| Monroe | 3 | 2 | - | 1 | 6 |
| Morgan | 1 | - | - | - | 1 |
| Muskingum | 1 | - | - | 4 | 5 |
| Noble | - | - | - | 1 | 1 |
| Perry | - | - | - | - | - |
| Washington | - | - | - | - | - |
| Total | 9 | 8 | 2 | 15 | 34 |

Source: Who's Who in the Butter, Cheese and Milk Industries published by Urner Barry Company, New York City

¹ Reprint Annual Report Ohio Dairymen's Association, 1903, J. W. Decker
² Ohio Agricultural Experiment Station Bulletin #523, Sources of Market Milk and Butterfat in Ohio, C. G. McBride and T. K. Cowden, 1933

Cooperative Marketing by Producers

Several small milk bargaining cooperatives serve the producers of the county seat towns in the area. They include the Muskingum County Milk Producers Association, Marietta Milk Producers Association, Coshocton Milk Producers Association and Cambridge Milk Producers Association. One of the oldest cream selling cooperatives in southern Ohio, the Muskingum Valley Cooperative Dairy Sales Association has cream stations in several counties of the area. The Quaker City Cooperative Creamery Company is the only cooperative in the area engaged in manufacturing. The Dairymen's Cooperative Sales Association serving the Pittsburgh market and many smaller markets in Ohio and West Virginia has extensive membership in the area.

Status of Sanitary Controls

The development of sanitary regulations in this area has been influenced to a marked degree by the demand for milk in West Virginia. The most advanced supervision of milk supplies was found in the counties bordering on the Ohio River. They were Belmont, Jefferson, Monroe and Washington.

More detail in regard to counties will be given in the following sections.

Summary of Study by Counties and Townships

The material included in this section is a compilation of the information furnished by those who assisted in the mail survey supplemented by some additional data obtained in personal visits to the counties. Tables 7 to 9 and Figures 1 to 4 summarize the material for the district by counties. A discussion of each county with township analyses follows.

Table 7 summarizes the distribution of farms and cattle among the market outlets and Table 8 shows the percentage distribution of these farms and cattle by market outlet. In Table 9 is given the number of cattle per farm by market outlet.

Milk sold by producer-distributors belongs in the same outlet classification as milk sold to dealers for fresh fluid consumption. In the county tables they are combined. To find the number of farms and cattle involved in supplying consumers with fresh milk it is necessary in all instances to combine the "Producer-Distributor" figures with those of "Fluid to Distributor". The total number of farms in this classification was 2409 or 14.0 per cent. These 2409 farms, however, have 20.3 per cent of the milk cattle because the larger dairy farms seek the city market outlets. The farms selling butterfat rank lowest in average number of cattle per farm.

Among the counties the variation in percent of dairy farms selling milk for fluid consumption is from 3.5 per cent for Morgan County to 42.6 per cent for Jefferson County. In the case of per cent of milk cattle on farms selling milk for fluid consumption, Morgan County was low with 4.4 per cent and Jefferson was high with 54.7 per cent.

The Figures 1 to 4 show the concentration of milk cattle in the district. Figure 1 includes all cows in herds with 3 or more dairy cows. Figure 2 brings out the comparative unimportance of milk for fluid consumption in most of the counties. Figure 3 shows the location of the cattle from which milk is sold for manufacturing use and Figure 4 shows the widespread distribution of cattle from which butterfat is sold.

Table 7. Number of Dairy Farms and Number of Milk Cattle by Market Outlet
 11 Southeastern Ohio Counties, 1942

| County | Producer Distributor | | Fluid to Distributor | | Fluid to Manufacture | | Butterfat | | Not Classified | | Total | |
|------------|-------------------------|--------|-------------------------|--------|-------------------------|--------|-----------|--------|-------------------|--------|-------|--------|
| | Farms | Cattle | Farms | Cattle | Farms | Cattle | Farms | Cattle | Farms | Cattle | Farms | Cattle |
| Belmont | 83 | 1414 | 449 | 7539 | 733 | 9396 | 556 | 4797 | 121 | 679 | 1942 | 23825 |
| Coshocton | 25 | 513 | 42 | 870 | 882 | 10864 | 580 | 4901 | 32 | 239 | 1561 | 17387 |
| Guernsey | 48 | 595 | 220 | 3140 | 555 | 7211 | 855 | 6930 | 50 | 319 | 1728 | 18195 |
| Harrison | 31 | 466 | 172 | 3034 | 294 | 3291 | 467 | 4025 | 48 | 360 | 1012 | 11176 |
| Jefferson | 96 | 1396 | 297 | 4365 | 57 | 569 | 410 | 3764 | 62 | 441 | 922 | 10535 |
| Monroe | 12 | 94 | 112 | 1344 | 616 | 6856 | 1303 | 10357 | 178 | 1495 | 2221 | 20146 |
| Morgan | 11 | 136 | 44 | 504 | 481 | 4478 | 626 | 5700 | 81 | 577 | 1243 | 11395 |
| Muskingum | 63 | 768 | 238 | 3794 | 223 | 2553 | 1166 | 11247 | 65 | 637 | 1755 | 18999 |
| Noble | 21 | 266 | 94 | 1208 | 257 | 3791 | 1068 | 10760 | 80 | 746 | 1520 | 16771 |
| Perry | 33 | 410 | 87 | 1234 | 446 | 5104 | 609 | 5747 | 74 | 512 | 1249 | 13007 |
| Washington | 33 | 517 | 198 | 2755 | 573 | 5400 | 1091 | 8874 | 82 | 604 | 1977 | 18150 |
| Total | 456 | 6575 | 1953 | 29787 | 5117 | 59513 | 8731 | 77102 | 873 | 6609 | 17130 | 179586 |

Table 8. Number of Dairy Farms and Milk Cattle, and Per Cent of Each by Market Outlet, 11 Southeastern Ohio Counties, 1942

| County | Total Number of Farms | Total Number of Milk Cattle | For Fluid Consumption | | Fluid for Manufacture | | Butterfat | | Not Classified | |
|------------|-----------------------|-----------------------------|-----------------------|--------|-----------------------|--------|-----------|--------|----------------|--------|
| | | | Farm | Cattle | Farm | Cattle | Farm | Cattle | Farm | Cattle |
| | | | pct. | pct. | pct. | pct. | pct. | pct. | pct. | pct. |
| Belmont | 1942 | 23825 | 27.4 | 37.5 | 37.8 | 39.5 | 28.6 | 20.1 | 6.2 | 2.9 |
| Coshocton | 1561 | 17387 | 4.3 | 8.0 | 56.5 | 62.5 | 37.2 | 28.2 | 2.0 | 1.3 |
| Guernsey | 1728 | 18195 | 15.8 | 20.6 | 32.1 | 39.5 | 49.5 | 38.1 | 2.9 | 1.8 |
| Harrison | 1012 | 11176 | 20.0 | 31.4 | 29.0 | 29.4 | 46.2 | 36.0 | 4.7 | 3.2 |
| Jefferson | 922 | 10535 | 42.6 | 54.7 | 6.2 | 5.4 | 44.5 | 35.7 | 6.7 | 4.2 |
| Monroe | 2221 | 20146 | 5.6 | 7.2 | 27.7 | 34.0 | 58.7 | 51.4 | 8.0 | 7.4 |
| Morgan | 1243 | 11395 | 3.5 | 4.4 | 38.7 | 39.3 | 50.4 | 50.0 | 6.5 | 5.1 |
| Muskingum | 1755 | 18999 | 17.2 | 24.0 | 12.7 | 13.4 | 66.4 | 59.2 | 3.7 | 3.4 |
| Noble | 1520 | 16771 | 7.6 | 8.8 | 16.9 | 22.5 | 70.2 | 64.2 | 5.3 | 4.5 |
| Perry | 1249 | 13007 | 9.6 | 12.7 | 35.7 | 39.2 | 48.8 | 44.2 | 5.9 | 3.9 |
| Washington | 1977 | 18150 | 11.7 | 18.1 | 29.0 | 29.7 | 55.2 | 48.9 | 4.1 | 3.3 |
| Total | 17130 | 179586 | 14.0 | 20.3 | 29.9 | 33.1 | 51.0 | 42.9 | 5.1 | 3.7 |

Table 9. Number of Milk Cattle per Farm by Market Outlet 11 Southeastern Ohio Counties, 1942

| County | Producer Distributor | Fluid to Distributor | Fluid to Manufacture | Butterfat | Not Classified | Total |
|------------|----------------------|----------------------|----------------------|-----------|----------------|-------|
| | | | | | | |
| Belmont | 17.0 | 16.8 | 12.8 | 8.6 | 5.6 | 12.3 |
| Coshocton | 20.5 | 20.7 | 12.3 | 8.5 | 7.5 | 11.1 |
| Guernsey | 12.4 | 14.3 | 13.0 | 8.1 | 6.4 | 10.5 |
| Harrison | 15.0 | 17.6 | 11.2 | 8.6 | 7.5 | 11.0 |
| Jefferson | 14.5 | 14.7 | 10.0 | 9.2 | 7.1 | 11.4 |
| Monroe | 7.8 | 12.0 | 11.1 | 7.9 | 8.4 | 9.1 |
| Morgan | 12.4 | 11.5 | 9.3 | 9.1 | 7.1 | 9.2 |
| Muskingum | 12.2 | 15.9 | 11.5 | 9.7 | 9.8 | 10.8 |
| Noble | 12.7 | 12.9 | 14.8 | 10.1 | 9.3 | 11.0 |
| Perry | 12.4 | 14.2 | 11.4 | 9.4 | 6.9 | 10.4 |
| Washington | 15.7 | 13.9 | 9.4 | 8.1 | 7.4 | 9.2 |
| Total | 14.4 | 15.3 | 11.6 | 8.8 | 7.6 | 10.5 |

Figure 1. Cows Kept for Sale of All Dairy Products

Each Dot = 100 Cows

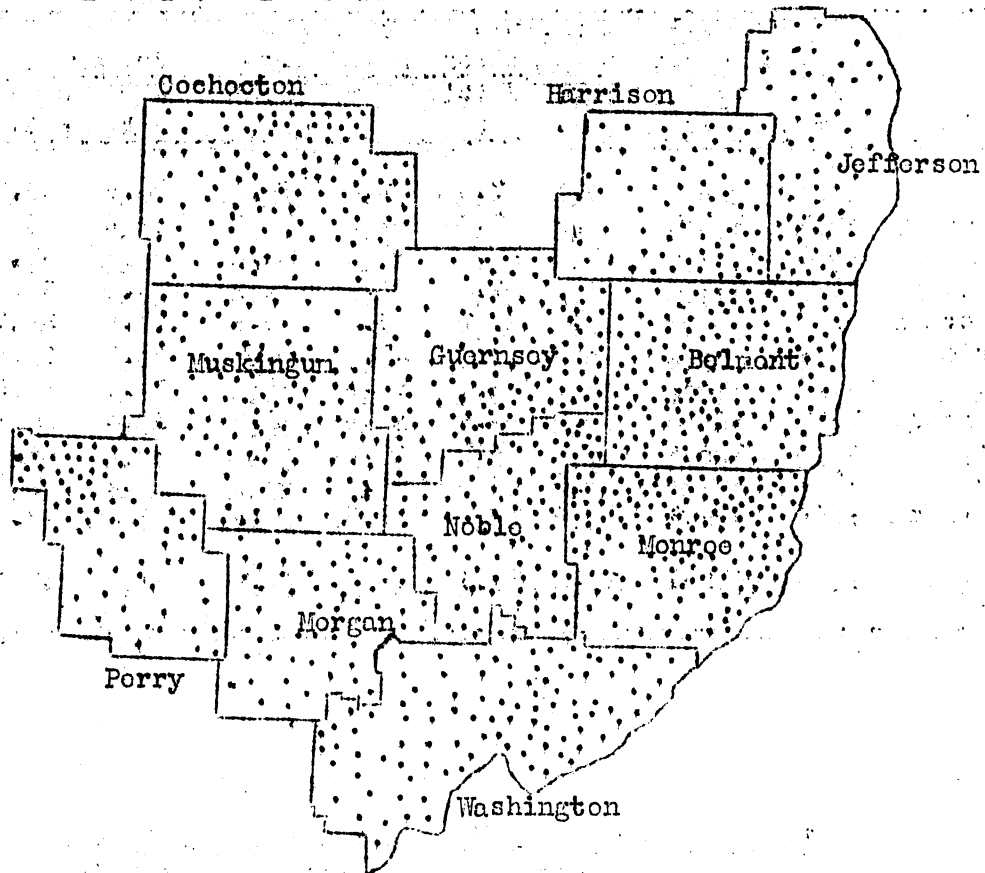
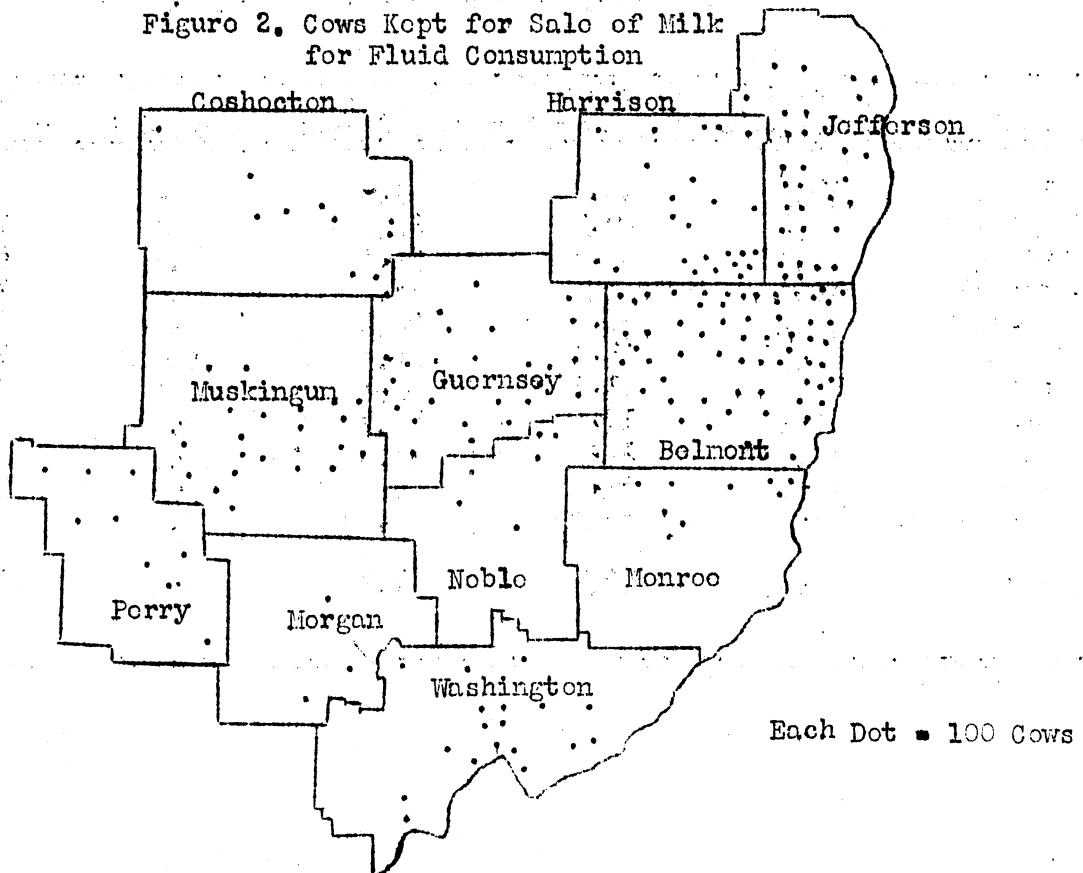


Figure 2. Cows Kept for Sale of Milk for Fluid Consumption



Each Dot = 100 Cows

Figure 3. Cows Kept for Sale of Fluid
Milk for Manufacture

Each Dot = 100 Cows

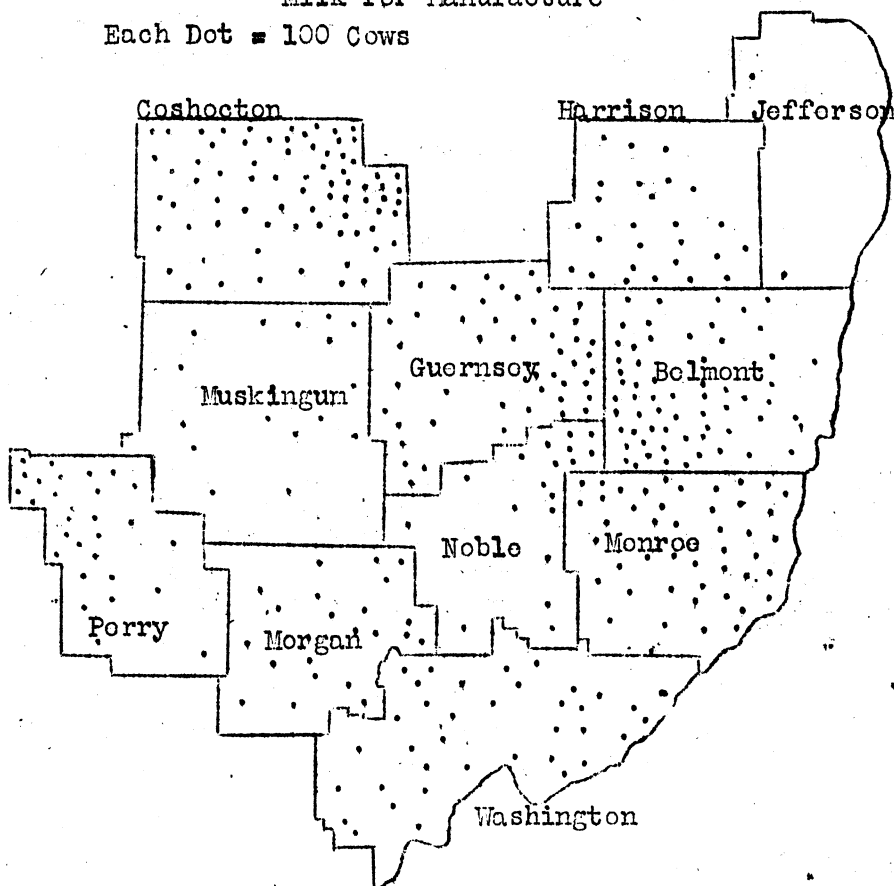
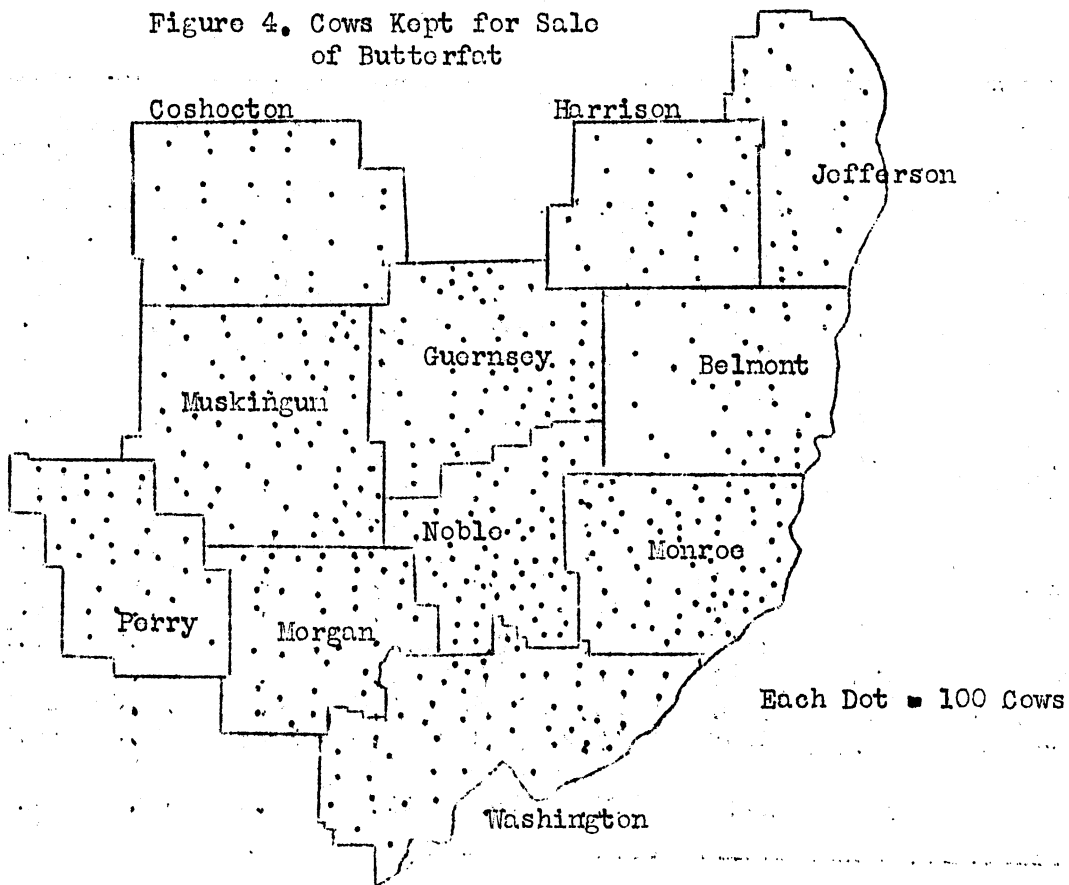


Figure 4. Cows Kept for Sale
of Butterfat



Belmont County

This was the most important county of this area from the standpoint of number of cows. Of dairy products sold from farms of Belmont County 77 per cent was sold as fluid milk. York and Washington were the only townships in which butterfat was the leading outlet.

The 1940 Census reported 915 farms with dairy products as the major source of income. The average income for 1939 from these products for the 915 was \$741. The total income from dairy products for the county for 1939 was \$837,785.

Belmont County led all counties so far surveyed in the number of producer-distributors under license during operation of the Burka Act, 1933 - 35. There were at that time 113 and of these 44 were reported as in business in this 1941-1942 survey. The reporters listed 39 additional farms making a total of 83 for the county in 1942.

Under House Bill 569 there were in April 1942 the following dealers licensed: Barnesville - Barnesville Dairymen's Cooperative, Better Dairy, Roods Quality Dairy, United Dairy Company; Bridgeport - Meadowcroft Dairy, Julius E. Marty Dairy, A. D. Price; Flushing - Cloverland Dairy; Martins Ferry - Ohio Valley Dairy Products, Inc., Powhatan Creamery Company; St. Clairsville - Willow Creek Dairy; Bothesda - Wood Bros. Dairy. There were only 5 cream stations licensed at this date.

This county was operating as to sanitary controls under a modified form of the U. S. Public Health Service Standard ordinance. A sanitarian was employed.

Table 10. Number of Dairy Farms and Milk Cattle, and Per cent of Each by Market Outlet, Belmont County

| Township | Total Number of Farms | Total Number of Milk Cattle | For Fluid | | Fluid for | | Butterfat | | Not | |
|------------|--------------------------------|--------------------------------------|-------------|--------|-------------|--------|-----------|--------|------------|--------|
| | | | Consumption | | Manufacture | | Farm | | Classified | |
| | | | Farm | Cattle | Farm | Cattle | Farm | Cattle | Farm | Cattle |
| | | | pct. | pct. | pct. | pct. | pct. | pct. | pct. | pct. |
| Colerain | 71 | 730 | 42.3 | 59.2 | 4.2 | 2.2 | 45.1 | 35.7 | 8.4 | 2.9 |
| Flushing | 93 | 1075 | 26.9 | 45.9 | 36.5 | 35.4 | 23.7 | 15.0 | 12.9 | 3.8 |
| Goshen | 189 | 2300 | 20.6 | 26.9 | 37.0 | 45.3 | 30.2 | 21.5 | 12.2 | 6.3 |
| Kirkwood | 129 | 1726 | 31.0 | 40.3 | 52.7 | 50.1 | 15.5 | 9.1 | 0.8 | 0.5 |
| Mead | 90 | 1224 | 40.0 | 62.8 | 31.1 | 20.6 | 23.3 | 14.6 | 5.6 | 2.0 |
| Pease | 75 | 872 | 50.6 | 63.1 | 2.7 | 2.1 | 37.3 | 29.5 | 9.4 | 5.3 |
| Putney | 73 | 1159 | 79.4 | 87.2 | 15.1 | 9.6 | 5.5 | 3.2 | 0.0 | 0.0 |
| Richland | 195 | 2356 | 42.0 | 60.0 | 20.0 | 18.1 | 27.2 | 18.0 | 10.8 | 3.9 |
| Smith | 132 | 1365 | 37.9 | 49.1 | 33.3 | 25.9 | 25.0 | 23.5 | 3.8 | 1.5 |
| Somersot | 162 | 2138 | 3.7 | 3.2 | 74.7 | 82.7 | 21.6 | 14.1 | 0.0 | 0.0 |
| Union | 123 | 1451 | 37.4 | 52.7 | 26.0 | 27.0 | 31.7 | 18.1 | 4.9 | 2.2 |
| Warren | 177 | 2171 | 4.5 | 5.9 | 76.8 | 83.2 | 13.6 | 8.3 | 5.1 | 2.6 |
| Washington | 103 | 1013 | 15.5 | 20.4 | 15.5 | 20.5 | 69.0 | 59.1 | 0.0 | 0.0 |
| Wayne | 134 | 1561 | 0.7 | 1.7 | 60.5 | 68.8 | 30.6 | 22.6 | 8.2 | 6.9 |
| Wheeling | 120 | 1607 | 39.2 | 56.5 | 23.3 | 24.0 | 25.0 | 14.3 | 12.5 | 5.2 |
| York | 76 | 1077 | 13.2 | 18.2 | 26.3 | 27.9 | 60.5 | 53.9 | 0.0 | 0.0 |
| County | 1942 | 23825 | 27.4 | 37.5 | 37.8 | 39.5 | 28.6 | 20.1 | 6.2 | 2.7 |

Coshocton County

Milk for manufacturing accounted for the sales of milk from almost two thirds of the cows. A large condensery located at Coshocton provides an outlet for a large percentage of the manufacturing milk sold in this area. In only three townships did milk for fluid consumption account for the milk from as much as 25 per cent of the cows.

According to the 1940 Census there were 452 farms with dairy products as their major source of income. The average income from this source for the 452 farms was \$573 for 1939. For the county as a whole the income from sale of dairy products was \$570,141 for 1939.

There were 42 producer-distributors under license by the Ohio Milk Marketing in 1935. Eleven of these men were reported in business at the time of the survey and 14 others were reported making 25 in all for 1942.

Under the provisions of House Bill 569 the following dealers were under license in 1942. Coshocton - Carnation Company, Conner Dairy Products Company, Coshocton Creamery Company, Moto's Dairy, Poorloss Milk Company, Sicker-Jersey Farm; Bakersville - Bakersville Cheese Factory; Pearl - Pearl Valley Cheese Factory; Warsaw - Warsaw Cheese Company. There were 7 cream stations under license.

The City of Coshocton had been operating under the U.S. Public Health Service standard ordinance for some time. It was recently adopted for the county.

Table 11. Number of Dairy Farms and Milk Cattle, and Per cent of Each by Market Outlet, Coshocton County

| Township | Total Number of Farms | Total Number of Milk Cattle | For Fluid Consumption Farm pct. | Fluid for Cattle pct. | Fluid for Manufacture Farm pct. | Fluid for Cattle pct. | Butterfat Farm pct. | Butterfat Cattle pct. | Not Classified Farm pct. | Not Classified Cattle pct. |
|------------|--------------------------------|--------------------------------------|--|-----------------------------|--|-----------------------------|---------------------------|-----------------------------|-----------------------------------|-------------------------------------|
| Adams | 103 | 1420 | 1.0 | 0.3 | 70.9 | 80.8 | 23.3 | 16.2 | 4.0 | 2.7 |
| Bodford | 78 | 940 | 2.6 | 2.8 | 41.0 | 44.4 | 47.4 | 48.0 | 9.0 | 4.8 |
| Bothlohem | 66 | 781 | 4.6 | 12.4 | 62.1 | 62.8 | 33.3 | 24.8 | 0.0 | 0.0 |
| Clark | 77 | 1027 | 0.0 | 0.0 | 66.2 | 69.7 | 33.8 | 30.3 | 0.0 | 0.0 |
| Crawford | 107 | 1070 | 1.9 | 1.4 | 83.2 | 90.1 | 14.0 | 8.2 | 0.9 | 0.3 |
| Franklin | 58 | 610 | 3.5 | 7.6 | 29.3 | 34.1 | 65.5 | 57.2 | 1.7 | 1.1 |
| Jackson | 52 | 1054 | 12.0 | 15.6 | 48.9 | 60.1 | 33.7 | 20.1 | 5.4 | 4.2 |
| Jefferson | 69 | 698 | 3.0 | 6.7 | 44.9 | 54.2 | 43.4 | 34.7 | 8.7 | 4.4 |
| Keono | 72 | 930 | 4.2 | 6.3 | 63.9 | 67.3 | 31.9 | 26.4 | 0.0 | 0.0 |
| LaFayette | 50 | 690 | 20.0 | 37.7 | 54.0 | 47.5 | 24.0 | 14.2 | 2.0 | 0.6 |
| Linton | 74 | 787 | 6.8 | 22.5 | 63.5 | 55.8 | 29.7 | 21.7 | 0.0 | 0.0 |
| Mill Creek | 80 | 996 | 0.0 | 0.0 | 70.0 | 71.7 | 30.0 | 28.3 | 0.0 | 0.0 |
| Monroe | 71 | 755 | 0.0 | 0.0 | 46.5 | 61.6 | 53.5 | 38.4 | 0.0 | 0.0 |
| New Castle | 53 | 415 | 0.0 | 0.0 | 49.0 | 54.2 | 47.2 | 43.1 | 3.8 | 2.7 |
| Oxford | 68 | 705 | 10.3 | 20.7 | 55.9 | 52.2 | 29.4 | 22.6 | 4.4 | 4.5 |
| Perry | 76 | 724 | 0.0 | 0.0 | 57.9 | 68.6 | 42.1 | 31.4 | 0.0 | 0.0 |
| Pike | 60 | 629 | 0.0 | 0.0 | 18.3 | 28.3 | 81.7 | 71.7 | 0.0 | 0.0 |
| Tiverton | 63 | 664 | 17.5 | 26.2 | 41.3 | 40.6 | 39.7 | 29.7 | 1.5 | 3.5 |
| Tiscarawas | 24 | 336 | 25.0 | 42.0 | 54.2 | 47.6 | 20.8 | 10.4 | 0.0 | 0.0 |
| Virginia | 65 | 563 | 1.5 | 4.5 | 44.6 | 62.3 | 53.9 | 33.2 | 0.0 | 0.0 |
| Washington | 68 | 620 | 0.0 | 0.0 | 57.4 | 71.3 | 42.6 | 28.7 | 0.0 | 0.0 |
| White Eyes | 87 | 973 | 1.1 | 0.4 | 78.2 | 87.0 | 20.7 | 12.6 | 0.0 | 0.0 |
| County | 1561 | 17387 | 4.3 | 8.0 | 56.5 | 62.5 | 37.2 | 28.2 | 2.0 | 1.3 |

Guernsey County

Milk for manufacture and butterfat accounted for practically equal amounts of dairy products in this county while milk for fluid consumption accounted for only about 20 per cent of the total. In only one township was the latter outlet the predominating outlet.

The 1940 Census reported 495 farms with dairy products as the major source of income. The average income from this source for those farms was \$428 for 1939. The total income for this county from the sale of dairy products in 1939 was \$425,929.

There were 112 producer-distributors licensed under the Burk Act. Of these 25 were reported as in business in 1942 and 23 additional farms were added making a total of 48 in 1942.

There were under House Bill 569 the following firms operating under license in April, 1942. Cambridge - Cambridge Dairy Company, Guernsey Creamery, Associated Milk Products Company, Charles Y. Tribbie. Quaker City - Quaker City Co-operative Creamery Company. There were 9 cream stations licensed at this date.

The county authorities used the state code and regulations of the Ohio Department of Agriculture as a basis for sanitary controls. There was no sanitarian employed by the county.

Table 12. Number of Dairy Farms and Milk Cattle, and Per cent of Each by Market Outlet, Guernsey County

| Township | Total Number of Farms | Total Number of Milk Cattle | For Fluid Consumption | | Fluid for Manufacture | | Butterfat | | Not Classified | |
|-------------|--------------------------------|--------------------------------------|--------------------------|----------------|--------------------------|----------------|--------------|----------------|-------------------|----------------|
| | | | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. |
| Adams | 73 | 779 | 39.8 | 47.1 | 23.2 | 24.2 | 37.0 | 28.7 | 0.0 | 0.0 |
| Cambridge | 120 | 1148 | 21.7 | 30.0 | 9.2 | 15.8 | 64.1 | 50.3 | 5.0 | 3.0 |
| Center | 78 | 760 | 12.8 | 23.2 | 5.2 | 8.9 | 76.9 | 63.4 | 5.1 | 4.5 |
| Jackson | 86 | 618 | 20.9 | 27.8 | 0.0 | 0.0 | 75.6 | 69.9 | 3.5 | 2.3 |
| Jefferson | 76 | 866 | 6.6 | 8.1 | 35.5 | 45.7 | 55.3 | 44.0 | 2.6 | 2.2 |
| Knox | 78 | 654 | 0.0 | 0.0 | 47.4 | 60.6 | 50.0 | 37.6 | 2.6 | 1.8 |
| Liberty | 72 | 599 | 23.6 | 38.7 | 0.0 | 0.0 | 70.8 | 56.4 | 5.6 | 4.9 |
| Londonderry | 144 | 1515 | 11.1 | 18.1 | 45.8 | 54.1 | 43.1 | 27.8 | 0.0 | 0.0 |
| Madison | 77 | 734 | 0.0 | 0.0 | 62.3 | 71.8 | 37.7 | 28.2 | 0.0 | 0.0 |
| Millwood | 114 | 1455 | 9.8 | 9.1 | 30.7 | 38.7 | 60.5 | 52.2 | 0.0 | 0.0 |
| Monroe | 74 | 706 | 10.8 | 13.6 | 63.5 | 68.6 | 24.3 | 17.4 | 1.4 | 0.4 |
| Oxford | 124 | 1858 | 10.5 | 12.1 | 60.5 | 64.7 | 25.8 | 20.6 | 3.2 | 2.6 |
| Richland | 119 | 1195 | 24.4 | 35.4 | 31.1 | 37.0 | 44.5 | 27.6 | 0.0 | 0.0 |
| Sponcor | 106 | 1326 | 10.4 | 13.4 | 25.5 | 34.6 | 60.4 | 50.2 | 3.7 | 1.8 |
| Valley | 74 | 666 | 27.0 | 38.0 | 9.5 | 10.8 | 52.7 | 46.8 | 10.8 | 4.4 |
| Washington | 59 | 558 | 0.0 | 0.0 | 76.3 | 81.5 | 23.7 | 18.5 | 0.0 | 0.0 |
| Westland | 99 | 1050 | 23.2 | 32.2 | 37.4 | 57.5 | 39.4 | 10.2 | 0.0 | 0.0 |
| Wheeling | 78 | 663 | 2.6 | 1.8 | 42.3 | 50.4 | 54.8 | 39.8 | 10.3 | 8.0 |
| Wills | 77 | 1046 | 40.3 | 41.1 | 2.6 | 2.1 | 52.0 | 54.9 | 5.1 | 1.9 |
| County | 1728 | 16195 | 15.5 | 20.6 | 32.1 | 39.5 | 49.5 | 38.1 | 2.9 | 1.8 |

Harrison County

The outlet for dairy products from Harrison County was almost evenly divided between milk for fluid consumption, milk for manufacture and butterfat. Milk sales for fluid consumption was concentrated in the eastern part of the county while sales for fluid manufacture was mainly in the west half. Butterfat sales was well distributed over the entire county.

The 1940 Census reported 303 farms with dairy products as their major source of income. These 303 farms had an average income from this source in 1939 of \$720. For the county as a whole the sale of dairy products for 1939 amounted to \$330,651.

Harrison County had 30 producer-distributors licensed in 1935 and of these 9 were reported in 1942. This survey listed 22 new farms making a total of 31 in 1942.

Only 3 firms were licensed as milk dealers in April, 1942. They were Carson Dairy, New Athens; Hillcrest Dairy, Inc., Cadiz, and A. L. Nielson & Son Creamery, Freeport. There were 4 cream stations licensed.

There was no program of sanitary control in effect at the time of the survey.

Table 13. Number of Dairy Farms and Milk Cattle, and Per cent of Each by Market Outlet, Harrison County

| Township | Total Number of Farms | Total Number of Milk Cattle | For Fluid Consumption | | Fluid for Manufacture | | Butterfat | | Not Classified | |
|-------------|--------------------------------|--------------------------------------|--------------------------|----------------|--------------------------|----------------|--------------|----------------|-------------------|----------------|
| | | | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. |
| Anchor | 55 | 562 | 10.9 | 19.8 | 27.3 | 22.1 | 45.5 | 43.2 | 16.3 | 14.9 |
| Athens | 85 | 1118 | 34.1 | 52.7 | 28.2 | 22.0 | 37.7 | 25.3 | 0.0 | 0.0 |
| Cadiz | 98 | 964 | 27.6 | 42.2 | 27.5 | 23.6 | 40.8 | 32.1 | 4.1 | 2.1 |
| Franklin | 42 | 449 | 9.5 | 10.7 | 50.0 | 57.7 | 40.5 | 31.6 | 0.0 | 0.0 |
| Freeport | 63 | 632 | 6.4 | 13.3 | 44.4 | 40.2 | 47.6 | 45.9 | 1.6 | 0.6 |
| German | 55 | 608 | 25.4 | 34.2 | 1.8 | 2.0 | 67.3 | 56.4 | 5.5 | 7.4 |
| Green | 63 | 591 | 11.1 | 17.9 | 3.2 | 3.4 | 85.7 | 78.7 | 0.0 | 0.0 |
| Monroe | 70 | 622 | 11.4 | 18.5 | 38.6 | 46.3 | 50.0 | 35.2 | 0.0 | 0.0 |
| Morrfield | 74 | 922 | 12.2 | 19.5 | 36.5 | 40.7 | 51.3 | 39.8 | 0.0 | 0.0 |
| North | 59 | 484 | 6.8 | 20.0 | 27.1 | 29.5 | 50.8 | 42.4 | 15.3 | 8.1 |
| Nottingham | 67 | 625 | 4.5 | 7.7 | 34.3 | 37.2 | 50.8 | 47.4 | 10.4 | 7.7 |
| Runloy | 66 | 704 | 42.4 | 59.1 | 10.6 | 6.8 | 36.4 | 27.1 | 10.6 | 7.0 |
| Short Creek | 98 | 1628 | 46.9 | 54.7 | 33.7 | 33.3 | 19.4 | 12.0 | 0.0 | 0.0 |
| Stock | 62 | 687 | 12.9 | 23.7 | 37.1 | 38.1 | 37.1 | 27.8 | 12.9 | 10.4 |
| Washington | 55 | 580 | 10.9 | 6.6 | 36.4 | 44.1 | 52.7 | 49.3 | 0.0 | 0.0 |
| County | 1012 | 11176 | 20.0 | 31.4 | 29.0 | 29.4 | 46.2 | 36.0 | 4.7 | 3.2 |

Jefferson County

In this county the sale of milk for fluid consumption accounted for the milk from 55 per cent of the cows. This was higher than for any other county of the area. However, the actual number of cattle represented by such sales was exceeded by Belmont County which had over twice as many cows included in the study.

According to the 1940 Census there were 301 farms with dairy products as the major source of income. These 301 farms had an average income from such products of \$905. For the county as a whole the sale of dairy products for 1939 amounted to \$341,152.

In 1933 - 35 there were 102 producer-distributors under license. Of these 32 were reported in business in 1942 and those reporting added 64 new farms making a total for the county in 1942 of 96. This was one of the high counties in the state in number of producer-distributors.

The following firms were licensed under House Bill 569 in April, 1942; Steubenville; Graftons Dairy, Modern Dairy, Sweet Home Dairy Company, Union Dairy Company, Toronto - Melborn Dairy, Mingo Junction - Witherell Dairy, Mt. Pleasant - Zeyers Jersey Farm, Steubenville Pure Milk Corporation. No cream stations.

The U.S. Public Health Service standard ordinance is in effect under competent administration in both the City of Steubenville and the county. A considerable amount of milk from this county was going into West Virginia markets.

Table 14. Number of Dairy Farms and Milk Cattle, and Per cent of Each, Jefferson County

| Township | Total Number of Farms | Total Number of Milk Cattle | For Fluid Consumption | | Fluid for Manufacture | | Butterfat | | Not Classified | |
|--------------|--------------------------------|--------------------------------------|--------------------------|----------------|--------------------------|----------------|--------------|----------------|-------------------|----------------|
| | | | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. |
| Brush Creek | 23 | 248 | 0.0 | 0.0 | 7.1 | 5.2 | 92.4 | 94.8 | 0.0 | 0.0 |
| Cross Creek | 43 | 530 | 65.1 | 68.5 | 0.0 | 0.0 | 27.9 | 17.9 | 7.0 | 3.6 |
| Island Creek | 88 | 979 | 47.7 | 57.2 | 6.8 | 4.9 | 37.5 | 33.6 | 8.0 | 4.3 |
| Knox | 83 | 909 | 33.7 | 48.3 | 1.2 | 1.5 | 56.6 | 44.6 | 8.5 | 5.6 |
| Mt. Pleasant | 112 | 1340 | 36.7 | 52.4 | 15.2 | 12.9 | 45.5 | 34.0 | 2.6 | 0.7 |
| Ross | 51 | 683 | 47.1 | 57.0 | 0.0 | 0.0 | 52.9 | 43.0 | 0.0 | 0.0 |
| Salom | 103 | 1138 | 61.2 | 71.5 | 1.9 | 1.9 | 27.2 | 20.6 | 9.7 | 6.0 |
| Salina | 14 | 91 | 64.3 | 79.1 | 0.0 | 0.0 | 35.7 | 20.9 | 0.0 | 0.0 |
| Smithfield | 133 | 1577 | 34.6 | 44.9 | 0.0 | 0.0 | 59.4 | 51.6 | 6.0 | 3.5 |
| Springfield | 70 | 627 | 20.0 | 31.8 | 30.0 | 31.0 | 40.0 | 20.2 | 10.0 | 8.0 |
| Warren | 48 | 642 | 56.2 | 62.8 | 6.3 | 7.0 | 27.1 | 22.1 | 10.4 | 8.1 |
| Wayne | 105 | 1235 | 50.5 | 61.4 | 3.8 | 4.3 | 36.2 | 28.4 | 9.5 | 5.9 |
| Wells | 44 | 536 | 40.9 | 56.3 | 2.3 | 1.1 | 52.3 | 38.8 | 4.5 | 3.8 |
| County | 922 | 10535 | 42.6 | 54.7 | 6.2 | 5.4 | 44.5 | 35.7 | 6.7 | 4.2 |

Monroe County

Over 50 per cent of the Milk in Monroe County was sold in the form of butter-fat while the milk from only 7 per cent of the cows was sold for fluid consumption - only one township having as much as 20 per cent sold through this channel.

The 1940 Census reported 268 farms with dairy products as the major source of income. The average income from this source for these farms was \$457 in 1939. The total income for the county from sales of dairy products for 1939 was \$305,034.

There were 25 producer-distributors licensed under the Burk Act in 1935. Of these only 5 were reported as so selling in 1942 and 7 new farms were added making a total of 12 for 1942.

Under House Bill 569 in April 1942 there were under license one dealer distributing milk. Woodsfield Ice and Creamery Company, one creamery, Hannibal Creamery and 20 cream stations.

A local sanitary code was in effect for sanitation.

Table 15. Number of Dairy Farms and Milk Cattle, and Per cent of Each by Market Outlet, Monroe County

| Township | Total Number of Farms | Total Number of Milk Cattle | For Fluid Consumption Farm pct. | Fluid for Cattle pct. | Fluid for Manufacture Farm pct. | Fluid for Cattle pct. | Butterfat Farm pct. | Butterfat Cattle pct. | Not Classified Farm pct. | Not Classified Cattle pct. |
|-------------|--------------------------------|--------------------------------------|--|-----------------------------|--|-----------------------------|---------------------------|-----------------------------|-----------------------------------|-------------------------------------|
| Adams | 77 | 598 | 2.6 | 2.0 | 42.9 | 41.6 | 51.9 | 53.0 | 2.6 | 3.4 |
| Benton | 85 | 622 | 2.4 | 1.9 | 21.2 | 23.8 | 72.9 | 72.0 | 3.5 | 2.3 |
| Bethel | 102 | 758 | 2.0 | 4.0 | 25.5 | 29.0 | 62.7 | 57.1 | 9.8 | 9.9 |
| Centor | 273 | 2085 | 15.0 | 17.3 | 16.9 | 26.6 | 57.1 | 48.9 | 11.0 | 7.2 |
| Franklin | 130 | 1035 | 4.6 | 4.2 | 36.2 | 42.7 | 47.7 | 40.5 | 11.5 | 12.6 |
| Green | 93 | 969 | 0.0 | 0.0 | 44.1 | 54.2 | 55.9 | 45.8 | 0.0 | 0.0 |
| Jackson | 71 | 646 | 1.4 | 1.1 | 4.2 | 5.4 | 94.4 | 93.5 | 0.0 | 0.0 |
| Lee | 100 | 994 | 1.0 | 3.3 | 10.0 | 11.3 | 81.0 | 77.3 | 8.0 | 8.1 |
| Malaga | 167 | 1737 | 7.8 | 14.0 | 37.1 | 45.7 | 45.5 | 31.3 | 9.6 | 9.0 |
| Ohio | 128 | 1571 | 7.0 | 8.8 | 29.7 | 33.0 | 53.1 | 49.8 | 10.2 | 8.4 |
| Perry | 97 | 753 | 0.0 | 0.0 | 24.7 | 24.8 | 70.1 | 68.1 | 5.2 | 7.1 |
| Salom | 144 | 1400 | 1.4 | 1.5 | 27.8 | 38.2 | 60.4 | 47.9 | 10.4 | 12.4 |
| Sonoco | 165 | 1808 | 0.0 | 0.0 | 37.6 | 43.0 | 54.5 | 50.1 | 7.9 | 6.9 |
| Summit | 126 | 1040 | 0.8 | 0.8 | 25.4 | 28.2 | 63.5 | 62.4 | 10.3 | 8.6 |
| Sunbury | 157 | 1562 | 8.3 | 8.4 | 33.1 | 42.9 | 49.7 | 40.4 | 8.9 | 8.3 |
| Switzerland | 130 | 1513 | 13.8 | 21.8 | 33.3 | 34.2 | 42.8 | 36.0 | 10.1 | 8.6 |
| Washington | 102 | 675 | 10.8 | 9.9 | 27.5 | 32.2 | 61.7 | 57.9 | 0.0 | 0.0 |
| Wayne | 66 | 380 | 1.5 | 3.7 | 12.1 | 15.8 | 75.8 | 71.6 | 10.6 | 8.9 |
| County | 2221 | 20146 | 5.6 | 7.2 | 27.7 | 34.0 | 58.7 | 51.4 | 8.0 | 7.4 |

Morgan County

This county was lowest in the area both from the standpoint of actual number and percentage of cows from which milk was sold for fluid consumption. This study showed that the milk from only 55 farms and 354 cows was sold for such use.

According to the 1940 Census there were 169 farms reporting their major source of income as coming from dairy products. The average income per farm for those farms was \$436 for 1939. For that year the total income from the sale of dairy products was \$217,588 for the county. This was the lowest figure for such income of the counties of this area.

In 1935 there were 26 producer-distributors licensed under the Burk Act. Of these 3 were reported as in business in 1942 and 3 additional farms were added making a total of 11 in the county.

The Muskingum Valley Creamery Company of McConnellsville was the only dealer licensed under House Bill 569 in April, 1942. There were 9 cream stations licensed at this time.

There was no program of sanitary regulation or supervision in effect at the time of the survey.

Table 16. Number of Dairy Farms and Milk Cattle, and Per cent of Each by Market Outlet, Morgan County

| Township | Total Number of Farms | Total Number of Milk Cattle | For Fluid Consumption | | Fluid for Manufacture | | Butterfat | | Not Classified | |
|------------|--------------------------------|--------------------------------------|--------------------------|----------------|--------------------------|----------------|--------------|----------------|-------------------|----------------|
| | | | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. |
| Bloom | 56 | 626 | 1.8 | 4.0 | 41.1 | 37.1 | 46.4 | 50.9 | 10.7 | 8.0 |
| Bristol | 102 | 938 | 1.0 | 3.6 | 46.1 | 45.7 | 48.0 | 46.7 | 4.9 | 4.0 |
| Center | 102 | 751 | 0.0 | 0.0 | 62.7 | 59.3 | 34.3 | 39.1 | 3.0 | 1.6 |
| Deerfield | 97 | 931 | 1.0 | 1.6 | 37.1 | 36.2 | 53.6 | 56.8 | 8.3 | 5.4 |
| Honor | 81 | 940 | 2.5 | 3.2 | 21.0 | 20.2 | 66.6 | 65.6 | 9.9 | 11.0 |
| Malta | 86 | 712 | 3.5 | 6.6 | 44.2 | 44.8 | 41.8 | 38.8 | 10.5 | 9.8 |
| Manchester | 69 | 666 | 0.0 | 0.0 | 55.1 | 58.6 | 44.9 | 41.4 | 0.0 | 0.0 |
| Marion | 96 | 957 | 11.4 | 17.9 | 13.6 | 16.8 | 62.5 | 56.3 | 12.5 | 9.0 |
| Meigsville | 112 | 958 | 4.5 | 4.3 | 58.0 | 62.2 | 33.0 | 29.2 | 4.5 | 4.3 |
| Morgan | 25 | 244 | 36.0 | 42.7 | 32.0 | 35.6 | 24.0 | 17.6 | 8.0 | 4.1 |
| Penn | 95 | 854 | 6.3 | 6.3 | 39.0 | 38.9 | 54.7 | 54.8 | 0.0 | 0.0 |
| Union | 96 | 860 | 0.0 | 0.0 | 46.9 | 52.9 | 47.9 | 44.8 | 8.2 | 2.3 |
| Windsor | 158 | 1163 | 8.9 | 8.9 | 31.0 | 41.9 | 53.1 | 45.0 | 7.0 | 4.2 |
| York | 68 | 795 | 2.9 | 2.0 | 1.5 | 2.1 | 85.3 | 89.7 | 10.3 | 6.2 |
| County | 1243 | 11395 | 3.5 | 4.4 | 38.7 | 39.3 | 50.4 | 50.0 | 6.5 | 5.1 |

Muskingum County

The milk from two thirds of the farms with 3 or more cows and about 60 per-cent of the cows was sold in the form of butterfat in this county. Only in Monroe and Licking Townships was milk for manufacturing the dominant outlet.

The 1940 Census reported 514 farms with dairy products as the major source of income. The average income from dairy products for these 514 farms in 1939 was \$565 per farm. For the county as a whole the income from the sale of such products was \$498,441 for 1939.

There were 94 producer-distributors licensed under the Burka Act. Of these 22 were reported as in business and 41 additional farms were listed in the survey making a total of 63 in 1942.

Under House Bill 569 the following firms were licensed as dealers: Zanosville-Arlington Dairy, Cozy Corner Dairy, Griener Dairy Co., Hemmer Ice Cream Company, Home Dairy, Irvin Dairy, Mattingly Dairy (Hillside), Moores & Ross, Shady Lane Dairy, Gratiot - Irvin-Holmes, Frazeyburg - A. R. Minnick, New Concord - Ohio Valley Dairy. There were at this time 18 cream stations under license.

At the time of the survey there was no milk ordinance in effect in the county. The City of Zanosville employed a sanitarian.

Table 17. Number of Dairy Farms and Milk Cattle, and Per cent of Each by Market Outlet, Muskingum County

| Township | Total Number of Farms | Total Number of Milk Cattle | For Fluid Consumption | | Fluid for Manufacture | | Butterfat | | Not Classified | |
|-------------|--------------------------------|--------------------------------------|--------------------------|----------------|--------------------------|----------------|--------------|----------------|-------------------|----------------|
| | | | Farm pet. | Cattle pet. | Farm pet. | Cattle pet. | Farm pet. | Cattle pet. | Farm pet. | Cattle pet. |
| Adams | 64 | 660 | 0.0 | 0.0 | 32.3 | 36.1 | 67.2 | 63.9 | 0.0 | 0.0 |
| Blue Rock | 53 | 452 | 7.5 | 12.6 | 0.0 | 0.0 | 92.5 | 87.4 | 0.0 | 0.0 |
| Brush Creek | 39 | 318 | 7.7 | 8.5 | 0.0 | 0.0 | 92.3 | 91.5 | 0.0 | 0.0 |
| Cass | 47 | 543 | 4.2 | 3.5 | 14.9 | 15.8 | 74.5 | 72.2 | 6.4 | 8.5 |
| Clay | 25 | 188 | 4.0 | 9.6 | 0.0 | 0.0 | 92.0 | 85.6 | 4.0 | 4.8 |
| Falls | 67 | 830 | 43.3 | 64.3 | 0.0 | 0.0 | 56.7 | 35.7 | 0.0 | 0.0 |
| Harrison | 33 | 332 | 27.3 | 33.1 | 33.3 | 29.2 | 36.4 | 36.5 | 3.0 | 1.2 |
| Highland | 68 | 681 | 10.3 | 13.0 | 32.4 | 35.0 | 57.3 | 52.0 | 0.0 | 0.0 |
| Hopewell | 122 | 1364 | 17.2 | 23.0 | 24.6 | 25.6 | 50.0 | 44.3 | 3.2 | 7.1 |
| Jackson | 80 | 757 | 3.8 | 6.6 | 25.0 | 32.9 | 71.2 | 60.5 | 0.0 | 0.0 |
| Licking | 42 | 476 | 11.9 | 4.2 | 40.5 | 54.4 | 38.1 | 34.0 | 9.5 | 7.4 |
| Madison | 59 | 607 | 1.7 | 2.0 | 23.7 | 24.7 | 69.5 | 68.7 | 5.1 | 4.6 |
| Meigs | 133 | 1221 | 0.8 | 2.4 | 0.0 | 0.0 | 99.2 | 97.6 | 0.0 | 0.0 |
| Monroe | 60 | 605 | 0.0 | 0.0 | 76.7 | 77.4 | 23.3 | 22.6 | 0.0 | 0.0 |
| Muskingum | 89 | 1232 | 24.7 | 35.4 | 0.0 | 0.0 | 62.9 | 54.5 | 12.4 | 10.1 |
| Newton | 155 | 1415 | 22.6 | 34.1 | 5.2 | 8.3 | 71.6 | 56.5 | 0.6 | 1.1 |
| Perry | 59 | 676 | 13.6 | 17.3 | 0.0 | 0.0 | 86.4 | 82.7 | 0.0 | 0.0 |
| Rich Hill | 134 | 1736 | 20.4 | 29.3 | 0.0 | 0.0 | 66.4 | 65.5 | 5.2 | 5.2 |
| Salt Creek | 50 | 660 | 38.0 | 50.6 | 0.0 | 0.0 | 62.0 | 49.4 | 0.0 | 0.0 |
| Salon | 40 | 1077 | 0.0 | 0.0 | 10.0 | 10.1 | 90.0 | 89.9 | 0.0 | 0.0 |
| Springfield | 77 | 899 | 32.5 | 39.6 | 0.0 | 0.0 | 53.2 | 48.2 | 14.3 | 12.2 |
| Union | 70 | 865 | 54.3 | 67.9 | 0.0 | 0.0 | 44.3 | 31.8 | 1.4 | 0.3 |
| Washington | 69 | 645 | 8.7 | 11.8 | 24.6 | 25.0 | 65.2 | 60.5 | 1.5 | 2.7 |
| Wayne | 70 | 770 | 34.3 | 50.7 | 1.4 | 4.2 | 48.6 | 37.5 | 15.7 | 7.6 |
| County | 1755 | 18999 | 17.2 | 24.0 | 12.7 | 13.4 | 66.4 | 59.2 | 3.7 | 3.4 |

Noble County

Noble County was highest in this area in the proportion of its milk going for butterfat. Milk from 1068 farms with 10,760 dairy cattle was going for this purpose. In 6 townships over 75 per cent of the farms with 3 or more cows sold butterfat.

According to the 1940 Census there were 233 farms in this county with dairy products as their major source of income. The average income per farm of these 233 farms from such products was \$396 for 1939. For the county as a whole the sale of dairy products amounted to \$245,197 for 1939.

In 1935 there were 29 producer-distributors licensed under the Burka Act. Of these 8 were in business in 1942 and those reporting added 13 additional farms making a total of 21 in 1942.

The Caldwell Produce Company of Caldwell was the only firm licensed as a dealer under House Bill 569 in April, 1942. There were at that time 10 cream stations under license.

There was no program of milk sanitation in effect in the county at the time of the survey.

Table 18. Number of Dairy Farms and Milk Cattle, and Per cent of Each by Market Outlet, Noble County

| Township | Total Number of Farms | Total Number of Milk Cattle | For Fluid | | Fluid for | | Butterfat | | Not | |
|------------|--------------------------------|--------------------------------------|-------------|--------|-------------|--------|-----------|--------|------|--------|
| | | | Consumption | Cattle | Manufacture | Cattle | Farm | Cattle | Farm | Cattle |
| | | | pct. | pct. | pct. | pct. | pct. | pct. | pct. | pct. |
| Beaver | 191 | 2678 | 1.6 | 1.2 | 47.1 | 53.3 | 42.4 | 38.6 | 8.9 | 6.9 |
| Brookfield | 94 | 1069 | 5.3 | 8.0 | 7.4 | 11.3 | 77.7 | 71.0 | 9.6 | 9.7 |
| Buffalo | 56 | 633 | 14.3 | 18.3 | 23.2 | 33.2 | 55.4 | 46.5 | 7.1 | 2.0 |
| Center | 90 | 968 | 6.7 | 4.8 | 21.2 | 27.3 | 71.1 | 66.2 | 1.1 | 1.7 |
| Elk | 132 | 1203 | 0.0 | 0.0 | 31.3 | 39.3 | 67.4 | 60.5 | 0.8 | 0.2 |
| Enoch | 79 | 969 | 10.0 | 20.4 | 5.1 | 8.2 | 73.4 | 69.6 | 2.5 | 1.8 |
| Jackson | 126 | 1036 | 0.8 | 2.7 | 4.0 | 8.1 | 84.9 | 78.8 | 10.3 | 10.4 |
| Jefferson | 66 | 703 | 1.5 | 0.4 | 3.0 | 7.7 | 95.5 | 91.9 | 0.0 | 0.0 |
| Marion | 105 | 1377 | 11.5 | 3.6 | 31.4 | 45.3 | 57.1 | 51.1 | 0.0 | 0.0 |
| Noble | 99 | 910 | 12.2 | 18.8 | 3.0 | 2.8 | 75.7 | 70.6 | 9.1 | 7.8 |
| Olive | 142 | 1382 | 12.0 | 12.8 | 4.2 | 4.9 | 83.1 | 81.9 | 0.7 | 0.4 |
| Seneca | 70 | 957 | 12.9 | 20.0 | 15.7 | 13.6 | 60.0 | 58.5 | 11.4 | 7.9 |
| Sharon | 109 | 962 | 3.7 | 3.2 | 0.0 | 0.0 | 96.0 | 96.8 | 0.0 | 0.0 |
| Stock | 91 | 860 | 0.0 | 0.0 | 22.0 | 24.1 | 76.9 | 74.2 | 1.1 | 1.7 |
| Wayne | 70 | 1044 | 32.9 | 34.7 | 2.9 | 2.5 | 57.1 | 56.7 | 7.1 | 6.1 |
| County | 1520 | 16771 | 7.6 | 8.8 | 16.9 | 22.5 | 70.2 | 64.2 | 5.3 | 4.5 |

Perry County

Milk from only 120 farms with 1644 dairy cattle was sold for fluid consumption. Four townships accounted for three fourths of the farms from which milk was sold for manufacturing use. These same four townships had 62 per cent of the dairy cattle of the county.

According to the 1940 Census there were 180 farms with dairy products as the major source of income. The average income per farm for these 180 farms for 1939 was \$553. The total income from sale of dairy products for this county in 1939 was \$257,703.

There were 48 producer-distributors licensed in 1935 under the Burk Act. Of these but 8 were listed by those reporting as in business as such in 1942. There were, however, 25 new farms listed making a total for the county of 33 in 1942.

Under the provisions of House Bill 569 there were two firms licensed as milk dealers. They were Arnold Farm Dairy at Somerset and Clouse-Snider at New Lexington. There were at this time 11 cream stations under license.

There was no program of sanitary control and inspection in effect at the time of the survey.

Table 19. Number of Dairy Farms and Milk Cattle, and Per cent of Each by Market Outlet, Perry County

| Township | Total Number of Farms | Total Number of Milk Cattle | For Fluid Consumption | | Fluid for Manufacture | | Butterfat | | Not Classified | |
|--------------|--------------------------------|--------------------------------------|----------------------------|----------------|-----------------------|----------------|--------------|----------------|----------------|----------------|
| | | | Farm pet. | Cattle pet. | Farm pet. | Cattle pet. | Farm pet. | Cattle pet. | Farm pet. | Cattle pet. |
| Bearfield | 90 | 641 | 15.3 | 15.5 | 15.3 | 29.8 | 50.2 | 49.9 | 10.2 | 4.6 |
| Clayton | 85 | 905 | 7.1 | 13.8 | 10.8 | 23.1 | 64.7 | 54.4 | 9.4 | 8.7 |
| Cool | | | of no marketing importance | | | | | | | |
| Harrison | 32 | 293 | 21.9 | 23.2 | 0.0 | 0.0 | 78.1 | 76.8 | 0.0 | 0.0 |
| Hopewell | 153 | 1506 | 9.9 | 11.5 | 35.8 | 34.7 | 40.4 | 50.7 | 5.9 | 3.1 |
| Jackson | 134 | 1374 | 3.0 | 3.6 | 42.5 | 50.4 | 45.5 | 40.5 | 9.0 | 5.5 |
| Madison | 60 | 740 | 23.3 | 34.1 | 21.7 | 22.6 | 51.7 | 40.5 | 3.3 | 2.8 |
| Monday Creek | 62 | 529 | 3.2 | 7.6 | 32.3 | 30.2 | 53.2 | 48.2 | 11.3 | 14.0 |
| Monroe | 74 | 505 | 13.5 | 29.3 | 17.6 | 22.3 | 59.4 | 44.2 | 9.5 | 4.2 |
| Pike | 60 | 596 | 21.7 | 26.3 | 31.7 | 30.0 | 36.6 | 35.6 | 10.0 | 8.1 |
| Pleasant | 45 | 400 | 26.7 | 35.5 | 8.9 | 7.0 | 62.2 | 56.0 | 2.2 | 1.5 |
| Roading | 212 | 2730 | 6.2 | 7.8 | 42.9 | 45.6 | 40.2 | 44.3 | 4.7 | 2.3 |
| Salt Lick | 11 | 65 | 27.3 | 32.3 | 0.0 | 0.0 | 72.7 | 67.7 | 0.0 | 0.0 |
| Thorn | 223 | 2363 | 2.7 | 4.6 | 64.1 | 63.0 | 32.3 | 31.2 | 0.9 | 1.2 |
| County | 1249 | 13007 | 9.6 | 12.7 | 35.7 | 39.2 | 48.8 | 44.2 | 5.9 | 3.9 |

Washington County

The milk from approximately 55 per cent of the farms with about 50 percent of the milk cows goes for butterfat in this county. In 12 of the 21 townships this is the predominating outlet from the standpoint of number of cows.

The 1940 Census reports 300 farms with dairy products as their major source of income. These 300 farms had an average income from this source of \$551 per farm in 1939. In that year the total income from sale of dairy products was \$382,864 for the entire county.

In 1935 there were 31 producer-distributors licensed under the Burke Act. Of these there were 17 so selling in 1942. Those reporting added 16 more farms to the list making a total of 33 in 1942.

Under House Bill 569 the following firms were licensed as dealers in April, 1942. Marietta - Broughtons Farm Dairy, Crystal Dairy Products Company, Whipple Creamery, Waterford United Dairy Company, Rockland - Blennerhassett Dairy. There were at this time 20 cream stations under license.

The U.S. Public Health service standard ordinance was in operation in both the county and the city of Marietta.

Table 21. Number of Dairy Farms and Milk Cattle, and Per cent of Each by Market Outlet, Washington County

| Township | Total Number of Farms | Total Number of Milk Cattle | For Fluid Consumption | | Fluid for Manufacture | | Butterfat | | Not Classified | |
|--------------|--------------------------------|--------------------------------------|--------------------------|----------------|--------------------------|----------------|--------------|----------------|-------------------|----------------|
| | | | Farm pet. | Cattle pet. | Farm pet. | Cattle pet. | Farm pet. | Cattle pet. | Farm pet. | Cattle pet. |
| Adams | 84 | 784 | 17.9 | 23.7 | 9.5 | 7.0 | 63.1 | 60.5 | 9.5 | 8.8 |
| Aurelius | 28 | 310 | 10.7 | 14.8 | 17.9 | 17.1 | 64.3 | 57.8 | 7.1 | 10.3 |
| Barlow | 166 | 975 | 6.6 | 6.4 | 52.8 | 51.5 | 33.0 | 32.2 | 7.6 | 9.9 |
| Belpro | 69 | 649 | 26.1 | 38.5 | 36.2 | 31.4 | 34.8 | 27.3 | 2.9 | 2.8 |
| Decatur | 74 | 529 | 2.7 | 4.5 | 44.6 | 52.0 | 52.7 | 43.5 | 0.0 | 0.0 |
| Dunham | 39 | 415 | 23.1 | 34.2 | 20.5 | 20.5 | 56.4 | 45.3 | 0.0 | 0.0 |
| Fairfield | 73 | 577 | 1.4 | 5.0 | 24.7 | 27.6 | 73.9 | 67.4 | 0.0 | 0.0 |
| Fearing | 103 | 1392 | 23.2 | 25.6 | 14.8 | 15.5 | 50.9 | 49.9 | 11.1 | 9.0 |
| Grandview | 71 | 582 | 4.2 | 8.3 | 7.0 | 10.0 | 81.7 | 74.2 | 7.1 | 7.5 |
| Independence | 59 | 344 | 0.0 | 0.0 | 3.4 | 3.8 | 96.6 | 96.2 | 0.0 | 0.0 |
| Lawrence | 114 | 999 | 8.8 | 10.0 | 24.6 | 25.0 | 62.3 | 62.6 | 4.3 | 2.4 |
| Liberty | 99 | 653 | 0.0 | 0.0 | 11.1 | 10.0 | 84.8 | 88.2 | 4.1 | 1.8 |
| Ludlow | 65 | 529 | 0.0 | 0.0 | 4.0 | 6.8 | 96.0 | 93.2 | 0.0 | 0.0 |
| Marietta | 93 | 984 | 37.7 | 57.1 | 33.3 | 25.2 | 19.3 | 13.0 | 9.7 | 4.7 |
| Muskingum | 126 | 1258 | 23.8 | 39.2 | 30.2 | 30.8 | 37.3 | 26.6 | 8.7 | 3.4 |
| Newport | 144 | 1164 | 16.7 | 24.0 | 47.2 | 46.2 | 36.1 | 29.8 | 0.0 | 0.0 |
| Palmer | 64 | 560 | 1.6 | 0.7 | 34.4 | 35.9 | 60.9 | 62.3 | 3.1 | 1.1 |
| Salem | 120 | 1199 | 9.2 | 14.6 | 43.3 | 45.5 | 43.3 | 34.7 | 4.2 | 5.2 |
| Waterford | 84 | 953 | 14.3 | 16.9 | 64.3 | 63.0 | 20.2 | 18.9 | 1.2 | 1.2 |
| Warren | 92 | 843 | 13.1 | 25.3 | 21.7 | 19.7 | 62.0 | 53.2 | 3.2 | 1.8 |
| Watertown | 147 | 1477 | 1.4 | 0.5 | 28.6 | 31.6 | 64.6 | 64.4 | 5.4 | 3.5 |
| Wesley | 113 | 974 | 7.1 | 8.3 | 23.0 | 26.6 | 61.9 | 57.9 | 8.0 | 7.2 |
| Total | 1977 | 18150 | 11.7 | 18.1 | 29.0 | 29.7 | 55.2 | 48.9 | 4.1 | 3.3 |

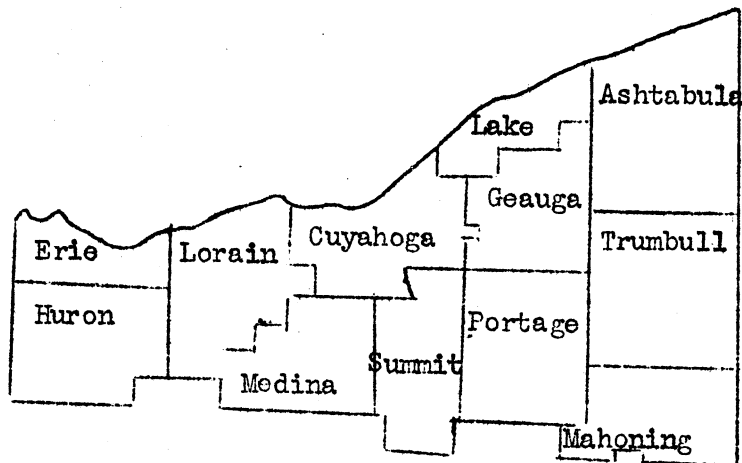
FARM SALES OF OHIO MILK THROUGH DIFFERENT COUNTIES

VIII. Northeastern Ohio Area: Ashtabula, Cuyahoga, Erie,
Geauga, Huron, Lake, Lorain, Mahoning,
Medina, Portage, Summit and
Trumbull Counties

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Department of Rural Economics
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Farm Sales of Ohio Milk Through Different Outlets

Part VIII

VIII. Northeastern Ohio Area: Ashtabula, Cuyahoga, Erie, Geauga, Huron
Lake, Lorain, Mahoning, Medina, Portage, Summit, Trumbull
Counties

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VIII. Northeastern Ohio Area: Ashtabula, Cuyahoga, Erie, Geauga,
Huron, Lake, Lorain, Mahoning, Medina, Portage
Summit and Trumbull Counties/1

by

C. G. McBride and R. W. Sherman

Sources of Data

This study, the eighth of a series, is based upon a survey of all farms with three or more dairy cattle at the time of the last test for tuberculosis conducted by the U. S. Bureau of Animal Industry and the Ohio Department of Agriculture. The records were obtained through the cooperation of these authorities and agricultural extension agents in charge of the records in the counties.

A list of herd owners was arranged by townships. Several copies of each list were made and these were mailed to a carefully selected group of key men, well distributed in each township. Each recipient of a list was asked to check the disposition of milk from each farm on which he had this information. When a producer was selling both to a city milk dealer and to a manufacturing outlet, he was recorded in the city milk dealer outlet.

When the checked sheets were returned the reports for each township were combined and in most cases it was found that a practically complete record had been obtained. In a few townships, the returns were not full enough to constitute a satisfactory record and other contacts were made in these townships in order to complete the data. A very high percentage of those who received lists cooperated by returning them promptly. Without this generous response on the part of those who were asked to assist, this survey would not have been possible. The cost in time and money of personal visitation to every township would have been prohibitive.

/1

| <u>Area I</u> | <u>Area III</u> | <u>Area IV</u> | <u>Area V</u> | <u>Area VI</u> | <u>Area VII</u> |
|----------------|-----------------|----------------|---------------|----------------|-----------------|
| Delaware | Defiance | Butler | Adams | Allen | Belmont |
| Fairfield | Fulton | Champaign | Ottawa | Ashland | Coshocton |
| Franklin | Hancock | Clark | Brown | Auglaize | Guernsey |
| Licking | Henry | Clermont | Fayette | Crawford | Harrison |
| Madison | Lucas | Clinton | Gallia | Hardin | Jefferson |
| Pickaway | Ottawa | Darke | Highland | Huron | Monroe |
| Union | Paulding | Green | Hocking | Logan | Morgan |
| | Putnam | Hamilton | Jackson | Mercer | Muskingum |
| <u>Area II</u> | Sandusky | Miami | Lawrence | Morrow | Noble |
| Carroll | Seneca | Montgomery | Meigs | Richland | Perry |
| Columbiana | Williams | Preble | Pike | Shelby | Washington |
| Holmes | Wood | Warren | Ross | Van Wert | |
| Medina | | | Scioto | | |
| Portage | | | Vinton | | |
| Stark | | | | | |
| Summit | | | | | |
| Tuscarawas | | | | | |
| Wayne | | | | | |

Limitations of the Study

Some difficulties were encountered in obtaining the information from the testing records. Some herds designated as mixed breeds undoubtedly were in whole or part beef cattle, but there was no way to determine the exact numbers. In areas surrounding the cities, there were many farms with 3 or 4 cattle tested. Replies indicated that many of these were kept primarily for home use but in some cases a small amount of milk or butterfat might be sold at certain times. Those who reported often lacked accurate information as to disposal of dairy products on such farms.

Some farmers had moved out of the township between the time of the test and the survey, but this factor was in large measure adjusted by the addition of new names, by those reporting. In a very few cases, where all attempts to obtain a complete record left too large a percentage of farms unclassified, some adjustments were made based on the records of adjacent townships with approximately the same conditions. Despite the limitations described above, it is believed that the study presents a dependable picture of the disposal of milk from the farms of the area.

This section is made up of 12 counties of northeastern Ohio which furnish the larger part of the fluid milk for Cleveland and Youngstown as well as part of the milk for Akron. Four of the counties--Huron, Medina, Portage and Summit--were included in other areas of the study. These counties are the outstanding ones of northeastern and northern Ohio which furnish milk to more than one market, and therefore logically belong in two areas. For this reason they are included in each area where it appeared they were of importance. Huron County furnishes milk for Cleveland from practically all townships and is also important in the sour cream and manufacturing milk areas to the west and southwest. Medina, Summit and Portage counties were furnishing milk for fluid consumption to at least two major markets.

Type of Farming

This area is well adapted to the growing of wheat and hay. In wheat yields the area averaged 13 per cent higher than the state for 1939. In hay, yields were slightly in excess of the state average. In corn production, the area was well below that of the state as a whole. Only Lorain County reached the State average of 50 bushels. This is the area of greatest concentration of city population and of intensive dairy farming. Many tons of concentrated dairy feeds are brought into the area.

In Table 1 is given the four most important sources of cash farm income for each of the 12 counties. The sale of dairy products accounted for almost four times as much as any other one source. In four of the 12 counties over half the cash income came from sales of dairy products. Dairy products ranked first in ten of the twelve counties. The average annual cash income from sales of dairy products for the five year period was over 15 million dollars for the 12 counties.

Table 1 - Important Sources and Percentages of Total Cash Farm Income Contributed by, and Rank of each 12 Northeastern Ohio Counties, 1934-1938
Average*

| County | Total Cash Farm Income | Rank of Sources of Income and Their Relative Importance | | | | | | | |
|-----------|------------------------|---|---------------|-------------|---------------|-------------|---------------|----------------|---------------|
| | | First | Pct. of Total | Second | Pct. of Total | Third | Pct. of Total | Fourth | Pct. of Total |
| Ashtabula | \$5,266,000 | DAIRY | 49 | Green-house | 16 | Poultry | 10 | Fruit | 4 |
| Cuyahoga | 3,177,000 | Green-house | 46 | Nursery | 13 | Truck | 11 | Dairy | 11 |
| Eric | 2,576,000 | DAIRY | 23 | Truck | 19 | Wheat | 11 | Poultry | 4 |
| Geauga | 2,524,000 | DAIRY | 57 | Poultry | 14 | Potatoes | 11 | Maple Products | 5 |
| Huron | 3,569,000 | DAIRY | 24 | Wheat | 15 | Poultry | 12 | Hogs | 11 |
| Lake | 2,798,000 | Nursery | 57 | DAIRY | 11 | Fruit | 11 | Truck | 6 |
| Lorain | 4,247,000 | DAIRY | 43 | Poultry | 11 | Truck | 10 | Green-house | 9 |
| Mahoning | 2,524,000 | DAIRY | 51 | Poultry | 14 | Potatoes | 8 | Fruit | 6 |
| Modina | 3,453,000 | DAIRY | 48 | Poultry | 17 | Wheat | 7 | Potatoes | 7 |
| Portage | 3,249,000 | DAIRY | 53 | Potatoes | 14 | Poultry | 11 | Truck | 6 |
| Summit | 1,998,000 | DAIRY | 45 | Poultry | 12 | Truck | 10 | Potatoes | 7 |
| Trumbull | 3,358,000 | DAIRY | 61 | Poultry | 13 | Potatoes | 7 | Truck | 4 |
| Total | 38,739,000 | DAIRY | 40 | Poultry | 11 | Green-house | 8 | Truck | 6 |

* Derived from estimates of gross cash farm income as published by Department of Rural Economics of the Ohio State University and Ohio Agricultural Experiment Station, 1934-1938.

Roads

Movement of milk and cream into different market outlets is influenced to a great extent by the type of highway available. The only means of transportation used in marketing milk in this area in 1941 was the motor truck.

The public road mileage of these 12 counties, classified into hard surface, gravel and earth is given in Table 2. The percentage of gravel roads is relatively high but this is not of great importance from the standpoint of milk transportation, inasmuch as they can be used for this purpose all year round. The earth road, total of 1251 miles is low for such a large area as this. There were but five counties, Ashtabula, Geauga, Lake, Summit and Trumbull in which there were as many as 100 miles of earth roads.

Table 2. Public Road Mileage of the Area by Types and by Counties as of Jan. 1, 1941

| County | Hard Surface | | Gravel | | Earth | | Total Miles |
|-----------|--------------|------|----------|------|----------|------|----------------|
| | Miles | Pct. | Miles | Pct. | Miles | Pct. | |
| Ashtabula | 330.51 | 27.0 | 648.95 | 53.0 | 244.82 | 20.0 | 1,224.28 |
| Cuyahoga | 46.13 | 52.9 | 29.79 | 34.1 | 11.37 | 13.0 | 87.29 |
| Erie | 466.30 | 92.8 | 21.16 | 4.2 | 15.12 | 3.0 | 502.58 |
| Geauga | 252.10 | 31.6 | 353.10 | 44.3 | 192.70 | 24.1 | 797.90 |
| Huron | 366.03 | 41.3 | 503.20 | 56.8 | 17.00 | 1.9 | 886.23 |
| Lake | 182.16 | 32.7 | 239.88 | 43.0 | 135.40 | 24.3 | 557.44 |
| Lorain | 315.40 | 34.1 | 571.20 | 61.9 | 37.01 | 4.0 | 923.61 |
| Mahoning | 584.71 | 73.1 | 181.75 | 22.7 | 33.79 | 4.2 | 800.25 |
| Medina | 189.59 | 23.0 | 555.90 | 67.3 | 80.17 | 9.7 | 825.66 |
| Portage | 298.15 | 29.5 | 652.52 | 64.6 | 58.70 | 5.9 | 1,009.37 |
| Summit | 280.31 | 35.5 | 244.27 | 30.9 | 264.87 | 33.6 | 789.45 |
| Trumbull | 339.09 | 26.5 | 781.03 | 61.0 | 160.41 | 12.5 | 1,280.53 |
| Total | 3,650.48 | 37.7 | 4,782.75 | 49.4 | 1,251.36 | 12.9 | 9,684.59 |

Comparison of Study Data with Census and Crop and Livestock Reports

The United States Census and the Federal-State Cooperative Crop and Livestock Reporting Service have a listing of milk cattle as "cows and heifers, 2 years old and over". This classification can be used to compare with the data collected for this study as shown in Table 3.

For all but one of the previous areas factors were computed to convert the number of cattle tested in the last tuberculosis test to number of milk cows. This was done by taking several hundred farms for which records were available both for number of milk cattle tested for tuberculosis and actual number of milk cows in the herds. This percentage relation was applied to all herds in the area to make an estimate of the number of milk cows on the farms included in the study. Conversion factors had already been determined for Huron with 71.6 and for Medina, Portage and Summit Counties with 67.3 as they have been included in sections of this study published previously. For this northeastern Ohio area the records for 756 identical farms were compared. It was found that for each 100 cattle tested there were 68.75 milk cows. This ratio was used in Table 3 to convert "all cattle" of the tuberculosis test records to an estimated number of "milk cows". These computed figures are compared with the crop and livestock estimates in Table 3.

This section includes several of the heaviest milk producing counties of the state. The number of cows per farm was well above the state average for most of the counties as can be seen in Table 3. The number of cows per farm as determined by this study is considerably higher than the similar figure derived from the census. This is accounted for mostly by the exclusion of one and two cow producers in this study. Those were found in large numbers around the cities of northeastern Ohio.

Table 3. Number of Cows and Heifers, 2 Years Old and Over, Number of Milk Cows, Number of Cows Milked per Farm and Number of Cattle and Milk Cows per Farm in the Study by Counties

| County | Milk Cows and Heifers 2 yrs. old and over, Crop and Livestock estimate, 1942* | Milk Cows in Study ** | Cows*** per farm 1940 Census | All Cattle per farm in study | Cows only** per farm in Study |
|-------------|---|-----------------------|------------------------------|------------------------------|-------------------------------|
| Ashtabula | 25,100 | 20,202 | 7.6 | 14.9 | 10.2 |
| Cuyahoga | 3,600 | 1,304 | 3.4 | 12.6 | 8.7 |
| Erie | 6,100 | 4,467 | 5.0 | 10.6 | 7.3 |
| Geauga | 13,800 | 9,874 | 7.5 | 14.6 | 10.0 |
| Huron* | 12,000 | 10,201 | 5.2 | 8.9 | 6.4 |
| Lake | 2,700 | 1,891 | 3.6 | 10.5 | 7.2 |
| Lorain | 19,200 | 14,460 | 6.8 | 13.6 | 9.4 |
| Mahoning | 12,700 | 12,495 | 6.7 | 12.8 | 8.8 |
| Modina* | 16,500 | 13,125 | 6.4 | 11.4 | 7.7 |
| Portage * | 14,900 | 14,588 | 6.3 | 13.7 | 9.2 |
| Summit* | 8,300 | 5,669 | 5.0 | 11.6 | 7.8 |
| Trumbull | 19,200 | 17,246 | 6.1 | 13.4 | 9.2 |
| 12 Counties | 154,000 | 125,522 | 6.1 | 12.7 | 8.7 |
| State | 1,073,000 | XXXXX | 5.3 | XXX | XXX |

* Preliminary

** Conversion factor of 68.75 for all but Huron County with 71.6 and Modina, Portage and Summit Counties with 67.5 as explained in text above.

*** Cows and heifers, 2 years old and over kept mainly for milk production, 1939.

There was considerable difference in the number of farms selling whole milk as reported by the census and by this study. The difference can be accounted for largely by the exclusion of the farmer with one and two cows from the study as stated above. This was particularly true in counties with much suburban area where families keep just one or two cows and sell a little milk to their neighbors. In Cuyahoga County our study showed only 136 farms with three or more cows selling milk in fluid form while the 1940 census reported 319 farms selling fluid milk.

Table 4. Sales of Whole Milk and Butterfat and Number of Farms Reporting Each, by County, 1939.

| County | Farms report- ing whole milk sold (number) | Annual Sales of whole milk per farm reporting (gallons) | Farms report- ing cream sold as butter- fat (number) | Annual Sales of Butterfat per farm (pounds) |
|-----------|---|--|---|--|
| Ashtabula | 1,978 | 6,286 | 338 | 509 |
| Cuyahoga | 319 | 3,811 | 47 | 278 |
| Erie | 389 | 5,109 | 344 | 559 |
| Geauga | 1,056 | 5,556 | 74 | 339 |
| Huron | 803 | 3,675 | 794 | 506 |
| Lake | 239 | 4,019 | 52 | 516 |
| Lorain | 1,478 | 6,681 | 131 | 539 |
| Mahoning | 1,046 | 5,189 | 246 | 717 |
| Medina | 1,405 | 5,904 | 287 | 607 |
| Portago | 1,486 | 5,541 | 248 | 508 |
| Summit | 751 | 4,963 | 59 | 489 |
| Trumbull | 1,782 | 5,082 | 149 | 540 |
| Total | 12,732 | 5,500 | 2,769 | 537 |

Source: 1940 Census of Agriculture, First Series, Ohio

The population of this area increased 162 per cent from 1900 to 1940, and now comprises one third the population of the state. At the same time the number of cows decreased almost 10 per cent with a resultant drop in the number of cows per 100 population from 18.7 to 6.5. This latter figure is just about the necessary ratio to supply milk for fluid consumption as all production was available for such use.

Table 5. Number of Dairy Cows Compared with Total Population in Counties of the Area, 1900 and 1940

| County | 1900 | | | 1940 | | |
|-----------|----------------|---------------------|----------------------------|---------------|---------------------|----------------------------|
| | Dairy Cows* | Total Population | Cows per 100 Population | Dairy Cows | Total Population | Cows per 100 Population |
| Ashtabula | 23461 | 51448 | 45.6 | 25699 | 68674 | 37.4 |
| Cuyahoga | 15485 | 439120 | 3.5 | 3269 | 1217250 | 0.3 |
| Erie | 5366 | 37650 | 14.3 | 5597 | 43201 | 13.0 |
| Geauga | 16605 | 14744 | 112.6 | 13796 | 19430 | 71.0 |
| Huron | 8758 | 32330 | 27.1 | 10556 | 34800 | 30.3 |
| Lake | 5486 | 21680 | 25.3 | 2734 | 50020 | 5.5 |
| Lorain | 15847 | 54857 | 28.9 | 17322 | 112390 | 15.4 |
| Mahoning | 12394 | 70134 | 17.7 | 13110 | 240251 | 5.5 |
| Medina | 11200 | 21953 | 51.0 | 15777 | 33034 | 48.0 |
| Portago | 15807 | 29246 | 54.0 | 16621 | 46660 | 36.0 |
| Summit | 15330 | 71715 | 21.0 | 8328 | 339405 | 2.0 |
| Trumbull | 21236 | 46591 | 45.6 | 19475 | 132315 | 14.7 |
| Total | 167041 | 891473 | 18.7 | 152274 | 2337430 | 6.5 |

Source: U.S. Census of Population and of Agriculture, 1900 and 1940

* Cows and heifers 2 years old and over kept mainly for milk production, 1939

Changes in Market Outlets, 1903 - 1940

One of the first records of a systematic survey of outlets for milk and butterfat from Ohio farms is found in the annual report of Ohio Dairymen's Association for 1903 /1. Professor J. W. Docker of Ohio State University compiled this directory of butter and cheese factories and milk skimming and shipping stations. The totals for the state were: butter factories, 148; skimming stations, 77; Milk shipping stations, 22; American cheese factories, 114; Swiss cheese factories, 92. The report did not include milk dealers who purchased from farmers nor producer-distributors selling direct from farms.

In his survey Professor Docker classified the plants into private, stock company, and cooperative. In the 12 counties there were 153 of these plants as shown in Table 6. It is significant that almost all the American cheese plants were found in Ashtabula, Geauga, Lorain, Portage and Trumbull counties. In Part II /2 a similar concentration of Swiss cheese was shown in Tuscarawas, Columbiana and Holmes Counties.

Table 6. - Dairy Plants in Area in 1903
(excluding those engaged only in Milk Distribution)

| County | Butter | | | American Cheese | | | Swiss Cheese | | | Skimming Stations | | | Total |
|-----------|--------|---|----|-----------------|---|---|--------------|---|---|-------------------|---|---|-------|
| | P | S | C | P | S | C | P | S | C | P | S | C | |
| Ashtabula | 5 | 0 | 5 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 19 |
| Cuyahoga | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| Erie | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 3 |
| Gauga | 0 | 0 | 1 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17 |
| Huron | 3 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| Lake | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Lorain | 2 | 0 | 1 | 11 | 0 | 1 | 2 | 0 | 0 | 2 | 0 | 1 | 20 |
| Mahoning | 3 | 0 | 6 | 0 | 0 | 0 | 5 | 0 | 9 | 1 | 0 | 0 | 24 |
| Modina | 7 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 15 |
| Portage | 2 | 0 | 0 | 11 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 15 |
| Summit | 0 | 0 | 2 | 7 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 10 |
| Trumbull | 1 | 1 | 1 | 16 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 20 |
| Total | 25 | 1 | 16 | 77 | 0 | 5 | 10 | 0 | 9 | 8 | 1 | 1 | 153 |

/1. Reprint Annual Report Ohio Dairymen's Association, 1903, J. W. Docker

/2. Dept. of Rural Economics, Mimeograph Bulletin #131, Part II

The twenty-five year period 1900-24 was one of great changes in the area. Demand for city supplies of milk in both Pittsburg and Cleveland was increasing. Most of the American cheese factories were bought by milk dealers who established country plants for cooling milk to be shipped to the cities. On December 31, 1924 there were 15 county plants owned by Telling-Belle-Vernon of Cleveland and 19 owned by Rieck-McJunkin Co., Hermes-Grove and Harmony Creamery Co. of Pittsburgh.

In 1925 another important development began. A large trucking company began soliciting milk for truck transportation to Cleveland. Most of the farmers that shifted to these milk routes came from the Pittsburgh country plants. This resulted in the interlacing of truck routes going both to Pittsburgh and Cleveland country plants and direct to Cleveland.

A survey of sources of market milk and butterfat in Ohio was made in 1931 by McBride and Cowden 3. By this time the area was highly developed as a source of supply for Cleveland. Of 12,977 farms under Cleveland inspection in May 1931, there were 7312 in these 12 counties. Four counties, Ashtabula, Geauga, Lorain and Medina, each had more than 1000 farms under inspection by the Cleveland Division of Health.

By 1941 the number of plants engaged strictly in cooling for transportation to the city had declined greatly. Some manufacturing was being done in the country, notably at Lodi, Wellington, Farmdale and Andover. The influence of these plants can be seen in the township records that follow later in this bulletin.

Cooperative Marketing by Producers

This area saw some of the earliest developments of cooperative effort on the part of producers. As early as 1894 local Dairy Unions were organized. These organizations were composed of both farmers and operators of small cheese and butter factories. The object was "to secure national and state legislation that will effectually protect the great dairy industry of the United States against the ruinous competition of adulterations". 4.

The area has a peculiar history of cooperative milk associations that started as farmer owned stock companies operating plants and gradually came to be recognized as typical city milk concerns. The first of these was the Northern Ohio Milk Producers which attempted plant operation but failed in it. Later came the Producers Milk Co. The Ohio Farmers Cooperative Milk Association and the Dairymen's Milk Company.

At present there are three active collective bargaining associations operating in the territory. They are: The Milk Producers Association of Summit County and Vicinity, the Dairymen's Cooperative Sales Association (Pittsburgh and Northeastern Ohio markets) and the Milk Producers Federation (Cleveland)

There are also four farmer owned country milk plants - Wooster Farm Dairies in Wayne County, Dorset Milk Co. in Ashtabula County, Mahoning Valley Cooperative Association in Mahoning County, and Wayland Dairy Cooperative in Portage County.

Status of Sanitary Controls

Taking this area as a whole farm inspections date farther back than in any other of the areas studied. Cleveland began farm inspection about 1900 and in 1908 put all milk plants under license. On Oct. 8, 1923 the Cleveland Division of Health required that trucks be covered, that milk must not be on trucks longer than 2 hours unless iced and that it must under all circumstances reach the plants at below 55 degree temperature.

The other cities of this area have followed Cleveland closely as to rigid inspection of the milk supply. There are relatively few counties that have adopted the U.S. Public Health Service Standard ordinance. This is due in some measure to the quality and extent of city inspection as mentioned above.

3. Ohio Agricultural Experiment Station Bulletin No. 523, Sources of Market Milk and Butterfat in Ohio. C. G. McBride and T. K. Cowden, 1933.

4. Ohio Farmer, March 15, 1894.

Summary of Study by Counties and Townships

The material included in this section is a compilation of the information furnished by those who assisted in the mail survey supplemented by some additional data obtained in personal visits to the counties. Tables 7,8,9, and Figures 1 to 4 summarize the material for the district by counties. A discussion of each county with township analyses follows.

Table 7 summarizes the distribution of farms and cattle among the market outlets and Table 8 shows the percentage distribution of these farms and cattle by market outlet. In Table 9 is given the number of cattle per farm by market outlet.

Milk sold by producer-distributors belongs in the same outlet classification as milk sold to dealers for fresh fluid consumption. In the county tables they are combined. To find the number of farms and cattle involved in supplying consumers with fresh milk it is necessary in all instances to combine the "Producer-Distributor" figures with those of "Fluid to Distributor". The total number of farms in this classification is 10,474 or 72.6 per cent. These 10,474 farms, however, have 83.5 per cent of the milk cattle because the larger dairy farms seek the city market outlets. The farms selling butterfat rank lowest in average number of cattle per farm.

In only 2 counties was there an appreciable amount of milk being disposed of in other forms than for fluid consumption. In Huron County less than one third was being sold for fluid consumption and in Erie County slightly less than half the farms were selling for such use.

The Figures 1 to 4 show the concentration of milk cattle in the district. Figure 1 includes all cows in herds with 3 or more dairy cattle. Figure 2 brings out the importance of milk for fluid consumption in most of the counties. Figure 3 shows the location of the cattle from which milk is sold for manufacturing use and Figure 4 shows the distribution of cattle from which butterfat is sold. The last two figures bring out clearly the relative unimportance of milk for fluid manufacture and sour cream for butter manufacture.

Table 7. Number of Dairy Farms and Number of Milk Cattle,
by Market Outlet 12 Northeastern Ohio Counties - 1942

| County | Producer Distributor | | Fluid to Distributor | | Fluid for Manufacture | | Butterfat | | Not Classified | | Total | |
|-----------|-------------------------|--------|-------------------------|--------|--------------------------|--------|-----------|--------|-------------------|--------|-------|--------|
| | Farms | Cattle | Farms | Cattle | Farms | Cattle | Farms | Cattle | Farms | Cattle | Farms | Cattle |
| Ashtabula | 87 | 1335 | 1548 | 25195 | 67 | 744 | 252 | 1918 | 20 | 192 | 1974 | 29384 |
| Cuyahoga | 44 | 305 | 92 | 1511 | 0 | 0 | 14 | 81 | 0 | 0 | 150 | 1897 |
| Erie | 24 | 465 | 247 | 3443 | 86 | 757 | 245 | 1765 | 9 | 67 | 611 | 6497 |
| Geauga | 30 | 388 | 853 | 13203 | 0 | 0 | 77 | 549 | 27 | 222 | 987 | 14362 |
| Huron | 33 | 362 | 414 | 5194 | 351 | 3085 | 700 | 4961 | 96 | 645 | 1594 | 14247 |
| Lake | 22 | 328 | 168 | 2027 | 0 | 0 | 51 | 299 | 22 | 96 | 263 | 2750 |
| Lorain | 56 | 804 | 1242 | 18627 | 0 | 0 | 187 | 1245 | 57 | 357 | 1542 | 21033 |
| Mahoning | 89 | 1566 | 944 | 13827 | 12 | 141 | 286 | 2162 | 84 | 478 | 1415 | 18174 |
| Medina | 39 | 443 | 1207 | 15699 | 94 | 908 | 347 | 2291 | 25 | 161 | 1712 | 19502 |
| Portage | 43 | 640 | 1202 | 18041 | 90 | 1007 | 194 | 1546 | 50 | 442 | 1579 | 21676 |
| Summit | 83 | 1105 | 464 | 6201 | 21 | 151 | 119 | 772 | 38 | 195 | 725 | 8424 |
| Trumbull | 138 | 1792 | 1405 | 20905 | 27 | 453 | 232 | 1511 | 74 | 424 | 1876 | 25085 |
| Total | 688 | 9533 | 9786 | 143873 | 748 | 7246 | 2704 | 19100 | 502 | 3279 | 14428 | 183031 |

Table 8. Number of Dairy Farms and Milk Cattle, and Per Cent of Each by Market Outlet, 12 Northeastern Ohio Counties, 1942

| County | Total Number of Farms | Total Number of Milk Cattle | For Fluid Consumption | | Fluid for Manufacture | | Butterfat | | Not Classified | |
|-----------|--------------------------------|--------------------------------------|-----------------------|----------------|-----------------------|----------------|--------------|----------------|----------------|----------------|
| | | | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. |
| Ashtabula | 1974 | 29384 | 82.8 | 90.3 | 3.4 | 2.5 | 12.8 | 6.5 | 1.0 | 0.7 |
| Cuyahoga | 150 | 1897 | 90.7 | 95.7 | 0.0 | 0.0 | 9.3 | 4.3 | 0.0 | 0.0 |
| Erie | 611 | 6497 | 44.4 | 60.2 | 14.1 | 11.6 | 40.1 | 27.2 | 1.4 | 1.0 |
| Geauga | 987 | 14362 | 89.5 | 94.6 | 0.0 | 0.0 | 7.8 | 3.9 | 2.7 | 1.5 |
| Huron | 1594 | 14247 | 28.0 | 38.9 | 22.0 | 21.7 | 43.9 | 34.8 | 6.1 | 4.6 |
| Lake | 263 | 2750 | 72.2 | 85.6 | 0.0 | 0.0 | 19.4 | 10.9 | 8.4 | 3.5 |
| Lorain | 1542 | 21033 | 84.1 | 92.4 | 0.0 | 0.0 | 12.2 | 5.9 | 3.7 | 1.7 |
| Mahoning | 1415 | 18174 | 73.0 | 84.7 | 0.8 | 0.8 | 20.2 | 11.9 | 6.0 | 2.6 |
| Medina | 1712 | 19502 | 72.8 | 82.8 | 5.5 | 4.7 | 20.3 | 11.7 | 1.4 | 0.8 |
| Portage | 1579 | 21676 | 78.8 | 86.3 | 5.7 | 4.6 | 12.3 | 7.1 | 3.2 | 2.0 |
| Summit | 725 | 8424 | 75.4 | 86.7 | 2.9 | 1.8 | 16.4 | 9.2 | 5.3 | 2.3 |
| Trumbull | 1876 | 25085 | 82.3 | 90.5 | 1.4 | 1.8 | 12.4 | 6.0 | 3.9 | 1.7 |
| Total | 14428 | 183031 | 72.5 | 83.8 | 5.2 | 4.0 | 18.8 | 10.4 | 3.5 | 1.8 |

Table 9. Number of Milk Cattle per Farm by Market Outlet
12 Northeastern Ohio Counties, 1942

| County | Producer Distributor | Fluid to Distributor | Fluid to Manufacture | Butterfat | Not Classified | Total |
|-----------|-------------------------|-------------------------|-------------------------|-----------|-------------------|-------|
| Ashtabula | 15.3 | 16.3 | 11.1 | 7.6 | 9.6 | 14.9 |
| Cuyahoga | 6.9 | 16.4 | 0.0 | 5.8 | 0.0 | 12.6 |
| Erie | 19.4 | 13.9 | 8.8 | 7.2 | 7.4 | 10.6 |
| Geauga | 12.9 | 15.5 | 0.0 | 7.1 | 8.2 | 14.6 |
| Huron | 11.0 | 12.5 | 8.8 | 7.1 | 6.7 | 8.9 |
| Lake | 14.9 | 12.1 | 0.0 | 5.9 | 4.4 | 10.5 |
| Lorain | 14.4 | 15.0 | 0.0 | 6.7 | 6.3 | 13.6 |
| Mahoning | 17.6 | 14.6 | 11.8 | 7.6 | 5.7 | 12.8 |
| Medina | 11.4 | 13.0 | 9.7 | 6.6 | 6.4 | 11.4 |
| Portage | 14.9 | 15.1 | 11.2 | 8.0 | 8.8 | 13.7 |
| Summit | 13.3 | 13.4 | 7.2 | 6.5 | 5.1 | 11.6 |
| Trumbull | 13.0 | 14.9 | 16.8 | 6.5 | 5.7 | 13.4 |
| Total | 13.9 | 14.7 | 9.7 | 7.1 | 6.5 | 12.7 |

Figure 1 - Cows Kept for Sale of
all Dairy Products

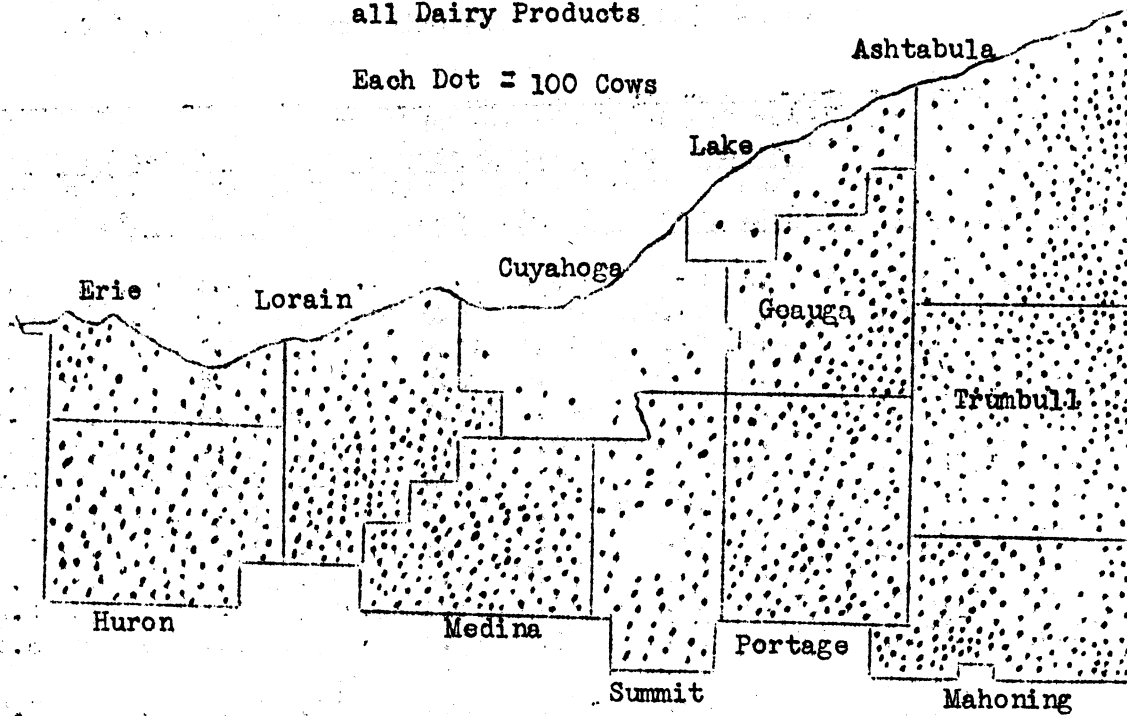


Figure 2 - Cows Kept for Sale of
Milk for Fluid Consumption

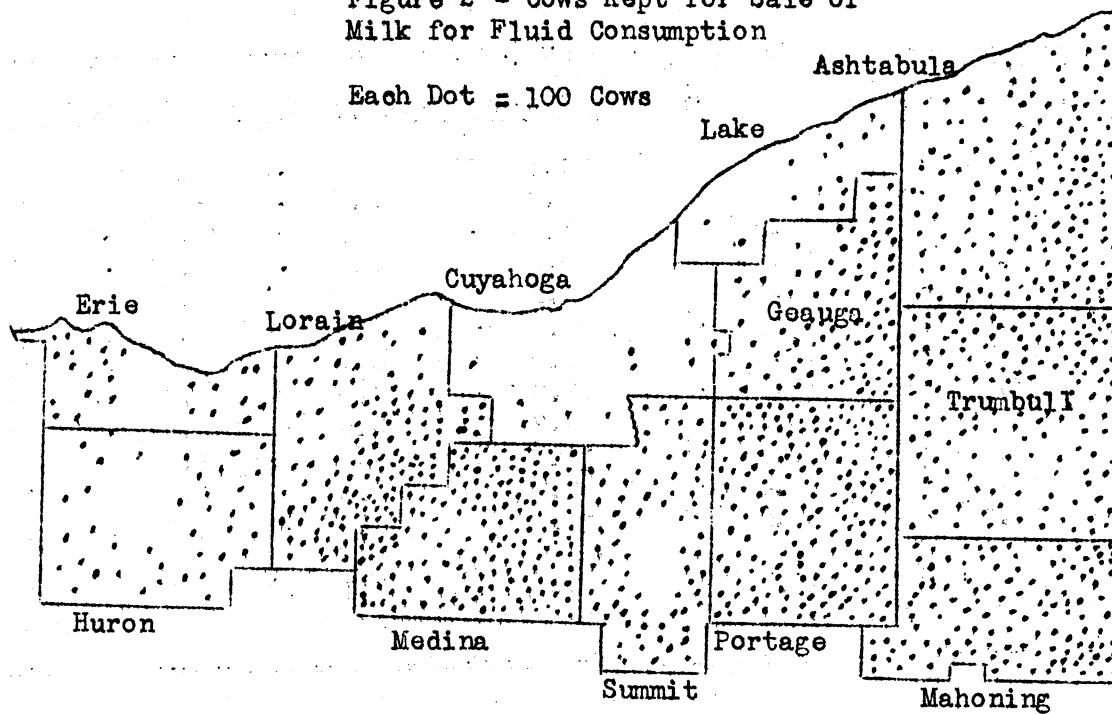


Figure 3 - Cows Kept for Sale of
Fluid Milk for Manufacture

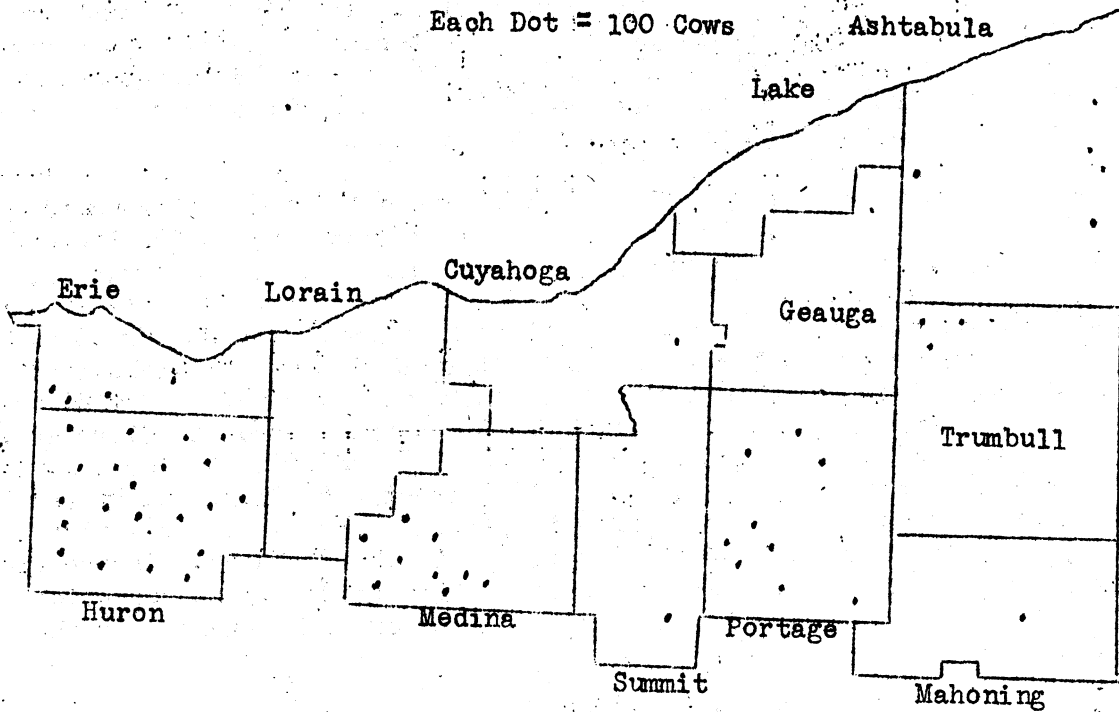
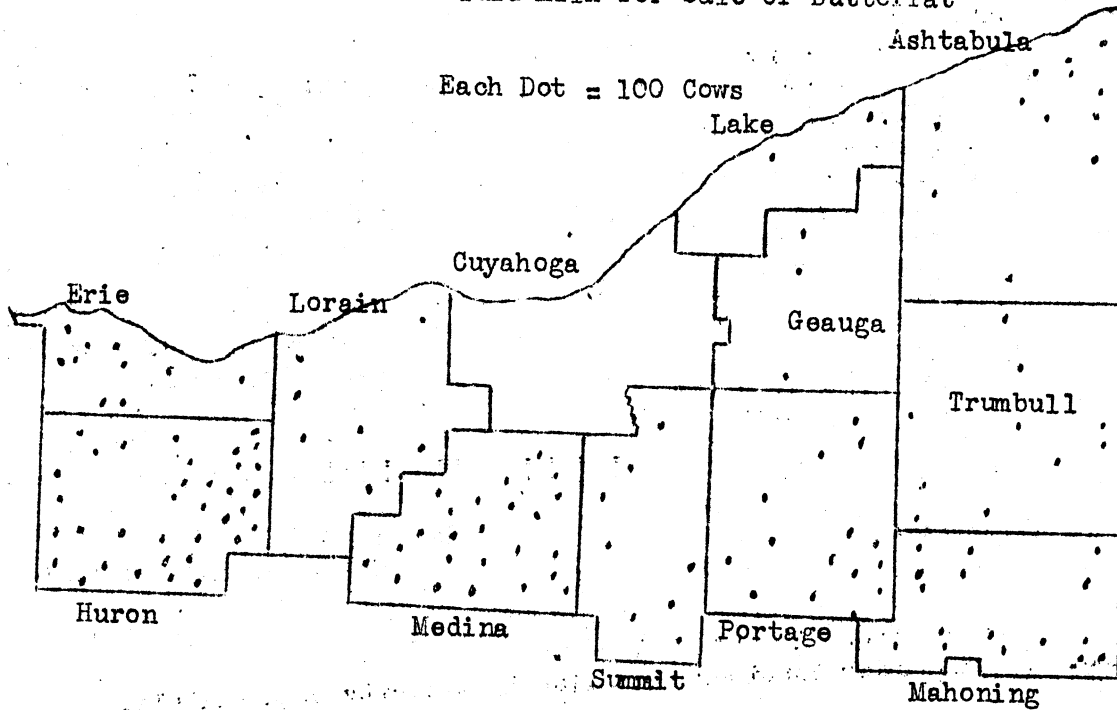


Figure 4 - Cows Kept for Sale of
Fluid Milk for Sale of Butterfat



Ashtabula County

This county led all others of the state in production of dairy products and in the sale of whole milk. The milk from over 90 per cent of the dairy cows of the county was sold for fluid consumption. In only two townships - Harpersfield and Sheffield - was the sale of butterfat of much importance. Milk was used for manufacturing only as an additional outlet when there was a surplus above fluid consumption except in 2 or 3 townships where the milk from a few farms went direct to manufacturing plants.

The 1940 census reported 1667 farms with the sale of dairy products as the major source of income. The average dairy products income for these farms was \$974 in 1939. The total value of dairy products sold in 1939 was \$1,930,222.

This county was developed shortly after the turn of the century as a city milk area by Pittsburgh dealers. The milk at that time was all taken into country plants and thence to Pittsburgh in railway tank cars. About 20 years ago most of the milk going to the city market was transferred to Cleveland. By that time motor truck transportation had developed and some of the milk, mostly from the heavier producing farms, was hauled directly to Cleveland by truck. This condition created a situation in which trucks going to country plants and those going to Cleveland frequently interlaced in their routes. As the survey was being completed, the Milk Producers Federation of Cleveland requested the Office of Defense Transportation to make a survey of milk trucking in the county.

Ashtabula county in 1935 led all the counties of the state in the number of producer-distributors under license. There were 129 and of these 40 were reported in business at the time of the survey. Those reporting listed 47 other farms in this class making a total of 87 in 1942.

Under House Bill 569 the following licenses were in operation in April of 1942.

Ashtabula:

Doxsio Dairy
John Kehus
Jas. McMorris Dairy
Quality Dairy
Stroupe's Dairy
Telling-Belle Vernon Co.

Conneaut:

Conneaut Creamery
Toini Coop Dairy
Guffoy's Dairy
H. L. Gulick
Griffey's Dairy

Jefferson:

Telling-Belle Vernon Co.
Truesdell Bros.

Geneva:

Gleason Dairy

Andover:

Meadow Gold Dairies Inc.

Dorset:

Dorset Milk Co.

Rome:

Telling-Belle Vernon Co.

There were cream stations at Jefferson, Geneva and Ashtabula

The county was operating under the U.S. Public Health Service standard ordinance. It was under consideration also by the city of Ashtabula.

Table 10. Number of Dairy Farms and Milk Cattle and Per cent of Each by Market Outlet, Ashtabula County

| Township | Total Number of Farms | Total Number of Milk Cattle | For Fluid Consumption | | Fluid for Manufacture | | Butterfat | | Not Classified | |
|---------------|--------------------------------|--------------------------------------|--------------------------|----------------|--------------------------|----------------|--------------|----------------|-------------------|----------------|
| | | | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. |
| Andover | 69 | 1006 | 88.4 | 95.2 | 0.0 | 0.0 | 11.6 | 4.8 | 0.0 | 0.0 |
| Ashtabula | 20 | 286 | 100.0 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Austinburg | 57 | 897 | 96.5 | 97.6 | 0.0 | 0.0 | 3.5 | 2.4 | 0.0 | 0.0 |
| Cherry Valley | 79 | 1474 | 93.7 | 97.0 | 0.0 | 0.0 | 6.3 | 3.0 | 0.0 | 0.0 |
| Colebrook | 100 | 1380 | 88.0 | 93.2 | 0.0 | 0.0 | 10.0 | 5.7 | 2.0 | 1.1 |
| Conneaut | 81 | 784 | 70.4 | 81.0 | 2.5 | 3.4 | 21.0 | 11.5 | 6.1 | 4.1 |
| Denmark | 96 | 1428 | 87.5 | 91.8 | 0.0 | 0.0 | 9.4 | 6.0 | 3.1 | 2.2 |
| Dorset | 80 | 1405 | 96.3 | 98.2 | 0.0 | 0.0 | 3.8 | 1.8 | 0.0 | 0.0 |
| Geneva | 36 | 328 | 69.4 | 83.8 | 0.0 | 0.0 | 30.6 | 16.2 | 0.0 | 0.0 |
| Harpersfield | 49 | 439 | 49.0 | 62.6 | 0.0 | 0.0 | 51.0 | 37.4 | 0.0 | 0.0 |
| Hartsgroove | 57 | 758 | 98.2 | 98.9 | 0.0 | 0.0 | 1.8 | 1.1 | 0.0 | 0.0 |
| Jefferson | 87 | 1082 | 79.3 | 90.7 | 0.0 | 0.0 | 19.5 | 8.6 | 1.2 | 0.7 |
| Kingsville | 22 | 289 | 81.8 | 87.9 | 0.0 | 0.0 | 18.2 | 12.1 | 0.0 | 0.0 |
| Lenox | 102 | 1609 | 88.2 | 95.5 | 0.0 | 0.0 | 11.8 | 4.5 | 0.0 | 0.0 |
| Monroe | 113 | 1664 | 69.9 | 80.2 | 8.9 | 6.9 | 21.2 | 12.9 | 0.0 | 0.0 |
| Morgan | 50 | 1006 | 98.0 | 99.7 | 0.0 | 0.0 | 2.0 | 0.3 | 0.0 | 0.0 |
| New Lyne | 66 | 1186 | 93.9 | 97.6 | 0.0 | 0.0 | 6.1 | 2.4 | 0.0 | 0.0 |
| Orwell | 90 | 1310 | 93.3 | 98.1 | 0.0 | 0.0 | 6.7 | 1.9 | 0.0 | 0.0 |
| Pierpont | 107 | 1472 | 59.8 | 67.7 | 26.2 | 21.7 | 14.0 | 10.6 | 0.0 | 0.0 |
| Plymouth | 66 | 857 | 68.2 | 80.4 | 0.0 | 0.0 | 31.8 | 19.6 | 0.0 | 0.0 |
| Richmond | 78 | 1321 | 79.5 | 85.5 | 19.2 | 13.1 | 1.3 | 1.4 | 0.0 | 0.0 |
| Rome | 64 | 1160 | 82.8 | 91.4 | 1.6 | 1.1 | 9.4 | 2.9 | 6.2 | 4.6 |
| Saybrook | 31 | 392 | 93.5 | 95.4 | 0.0 | 0.0 | 6.5 | 4.6 | 0.0 | 0.0 |
| Sheffield | 71 | 839 | 42.3 | 55.8 | 15.5 | 11.6 | 42.2 | 32.6 | 0.0 | 0.0 |
| Trumbull | 77 | 1075 | 84.4 | 91.0 | 0.0 | 0.0 | 15.6 | 9.0 | 0.0 | 0.0 |
| Wayne | 72 | 1481 | 93.1 | 96.4 | 0.0 | 0.0 | 1.4 | 0.5 | 5.5 | 3.1 |
| Williamsfield | 70 | 1319 | 95.7 | 97.2 | 0.0 | 0.0 | 4.3 | 2.8 | 0.0 | 0.0 |
| Windsor | 84 | 1137 | 96.4 | 98.1 | 0.0 | 0.0 | 2.4 | 1.4 | 1.2 | 0.5 |
| Total | 1974 | 29384 | 82.8 | 90.3 | 3.4 | 2.5 | 12.8 | 6.5 | 1.0 | 0.7 |

Cuyahoga County

Practically all the disposal of dairy products from farms in this County was for fluid consumption. Cream accounted for the sale of the milk from only 4.3 per cent of the cows. In three of the six areas which were of any market importance all sales were for fluid consumption.

The 1940 Census reported the total value of dairy products sold as \$253,267. It reported only 140 farms with the sale of dairy products as the main source of income. The average income from these sales for 1939 was \$1291 per farm.

In 1935 there were 38 producer-distributors licensed under the Burk Act. Of these, 6 were reported as in business at the time of the survey and 38 new names were added making a total of 44 in 1942.

In April 1942, the following firms were under license by the Division of Foods and Dairies as provided in House Bill 509.

Cleveland:

Cottage Creamery Co.
Dairymen's Ohio Farmers Milk Co.
Dorwin Dunham.
East Cleveland Dairy.
East 66th. Dairy.
Fairmont Creamery Co.
Glen Valley Farms
Glenville Dairy
Liberty Dairy
Perfection Dairy
Producers Milk Co.
Frank Puzman
A. L. Roth (Meadowbrook)
Woodhill Dairy

Hygrade Dairies, Inc.
Horton Dairy
Frank Krofta
Moyer Dairy Products Co.
Milk Producers Federation
H. J. Munz Dairy
Nezen Milk Co.
Old Meadow Creamery
Schneider-Bruce Dairy
Telling-Belle Vernon Co.
F. E. Walker
Harry C. Walker
Widmerink Dairies

Cleveland Heights:

Cedarbrook Dairy
O. A. Dean Dairy Co.
C. E. Obrock Dairy Co.

W. H. Ellrocht Dairy
Hillside Dairy Co.

Euclid:

Euclid Dairy Co.

J. F. Linnert Dairy

Berea:

Baesel Dairy Co.

Brecksville:

Hilltop Farm Dairy

Bedford:

City Dairy Co.

Garfield Hts:

Maple Knoll Dairy

Lakewood:

Supreme Dairy
Swiss Dairy Inc.

Prospect:

Windsor Evaporated Milk Co.

There was sanitary control of the dairy industry in both the county and city of Cleveland. The county does milk sanitation work for some of the smaller incorporated villages. Some of this is also done by the city health department. Many dealers who are inspected by the Cleveland Board of Health sell in several of the incorporated villages of the county. The standards of inspection of the county conform to the Cleveland Milk Code.

There were no cream stations licensed.

Table 11. Number of Dairy Farms and Milk Cattle and Per cent of Each by Market Outlet, Cuyahoga County

| Area | Total Number of Farms | Total Number of Milk Cattle | For Fluid | | Fluid for | | Butterfat | | Not | |
|----------------|--------------------------------|--------------------------------------|-------------|--------|-------------|--------|-----------|--------|------------|--------|
| | | | Consumption | | Manufacture | | | | Classified | |
| | | | Farm | Cattle | Farm | Cattle | Farm | Cattle | Farm | Cattle |
| | | | pct. | pct. | pct. | pct. | pct. | pct. | pct. | pct. |
| Bedford | 10 | 302 | 100.0 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Brocksville | 31 | 280 | 77.4 | 81.1 | 0.0 | 0.0 | 22.6 | 18.9 | 0.0 | 0.0 |
| North Royalton | 19 | 168 | 100.0 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Olmstead | 25 | 209 | 76.0 | 83.5 | 0.0 | 0.0 | 24.0 | 11.5 | 0.0 | 0.0 |
| Solon | 25 | 533 | 100.0 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Strongsville | 40 | 405 | 97.5 | 99.0 | 0.0 | 0.0 | 2.5 | 1.0 | 0.0 | 0.0 |
| Total | 150 | 1897 | 90.7 | 95.7 | 0.0 | 0.0 | 9.3 | 4.3 | 0.0 | 0.0 |

Erie County

The sale of milk for fluid consumption was the dominant outlet for all but Milan and Oxford townships, in which the sale of butterfat accounted for the milk from over half the cows.

According to the 1940 census, there were 169 farms with dairy products as their major source of income with an average per farm of \$921 for 1939. The total value of all dairy products sold for the county was \$353,697 for that year.

There were 19 producer-distributors licensed in 1935 of which 8 were reported in business in 1942. There were 3 new farms listed making a total of 24 in 1942.

The following dealers were licensed under the provisions of House Bill 569 in April 1942:

Sandusky:

Clover Leaf Dairy
Esmond Dairy Co.
Ennis Dairy
Fitz Bros.
Huron Dairy

Leako Dairy
Otto's Ice Cream
Sandusky Peoples Dairy
Arheit Dairy
Toft Dairy Co.

Vermilion:

Wikol Dairy

There were no cream stations under license at this time.

Sanitary regulations consisted of a local milk code covering both the county and Sandusky.

Table 12. Number of Dairy Farms and Milk Cattle, and Per cent of Each by Market Outlet, Erie County

| Township | Total Number of Farms | Total Number of Milk Cattle | For Fluid Consumption | | Fluid for Manufacture | | Butterfat | | Not Classified | |
|-----------------|--------------------------------|--------------------------------------|--------------------------|----------------|--------------------------|----------------|--------------|----------------|-------------------|----------------|
| | | | Farm pet. | Cattle pet. | Farm pet. | Cattle pet. | Farm pet. | Cattle pet. | Farm pet. | Cattle pet. |
| Berlin | 99 | 943 | 58.6 | 72.1 | 17.2 | 15.0 | 24.2 | 12.9 | 0.0 | 0.0 |
| Florence | 75 | 725 | 52.0 | 66.5 | 10.7 | 6.5 | 34.7 | 24.1 | 2.6 | 2.9 |
| Groton | 70 | 790 | 45.7 | 51.1 | 44.3 | 40.4 | 10.0 | 8.5 | 0.0 | 0.0 |
| Huron | 61 | 502 | 37.7 | 48.8 | 3.3 | 2.8 | 55.7 | 46.4 | 3.3 | 2.0 |
| Kelley's Island | | | of no market importance | | | | | | | |
| Margarotta | 92 | 1210 | 51.1 | 67.4 | 7.6 | 5.0 | 38.0 | 26.0 | 3.3 | 1.6 |
| Milan | 58 | 537 | 13.8 | 32.6 | 8.6 | 11.7 | 77.6 | 55.7 | 0.0 | 0.0 |
| Oxford | 70 | 581 | 21.4 | 25.5 | 21.4 | 18.4 | 57.2 | 56.1 | 0.0 | 0.0 |
| Perkins | 53 | 800 | 51.7 | 77.9 | 0.0 | 0.0 | 44.8 | 20.0 | 3.5 | 2.1 |
| Portland | | | of no market importance | | | | | | | |
| Vermillion | 28 | 409 | 67.9 | 81.9 | 3.6 | 1.2 | 28.5 | 16.9 | 0.0 | 0.0 |
| Total | 611 | 6497 | 44.4 | 60.2 | 14.1 | 11.6 | 40.1 | 27.2 | 1.4 | 1.0 |

Geauga County

No sales of milk for manufacturing use were reported in this county and only about 4 per cent was sold in the form of butterfat. In three townships all sales were reported for fluid consumption.

According to the 1940 census there were 871 farms with dairy products as their major source of income with an average per farm of \$1188 in 1939. The total value of all dairy products sold for the county for 1939 was \$1,222,737.

There were 24 producer-distributors licensed in 1935. Only 5 of these were recorded as in business at the time of the survey. There were 25 new ones listed by those reporting to make a total of 25 for 1942.

Two dealers were licensed in 1942 under House Bill 569. They were Moss Farm Dairy at Chesterland and Town Line Dairy at Chardon. There were no cream stations.

There was no milk ordinance in effect at the time of the survey but plans were under way for the adoption of the U.S. Public Health Service standard ordinance.

Table 13. Number of Dairy Farms and Milk Cattle and Per cent of Each by Market Outlet, Geauga County

| Township | Total Number of Farms | Total Number of Milk Cattle | For Fluid Consumption | | Fluid for Manufacture | | Butterfat | | Not Classified | |
|-------------|-----------------------|-----------------------------|-----------------------|--------|-----------------------|--------|-----------|--------|----------------|--------|
| | | | Farm | Cattle | Farm | Cattle | Farm | Cattle | Farm | Cattle |
| | | | pct. | pct. | pct. | pct. | pct. | pct. | pct. | pct. |
| Auburn | 65 | 939 | 89.2 | 94.0 | 0.0 | 0.0 | 10.3 | 6.0 | 0.0 | 0.0 |
| Bainbridge | 35 | 599 | 100.0 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Burton | 49 | 949 | 100.0 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Chardon | 30 | 251 | 60.0 | 62.2 | 0.0 | 0.0 | 40.0 | 37.8 | 0.0 | 0.0 |
| Chester | 36 | 507 | 77.8 | 92.7 | 0.0 | 0.0 | 16.7 | 5.9 | 5.5 | 1.4 |
| Claridon | 59 | 884 | 93.2 | 96.2 | 0.0 | 0.0 | 6.8 | 3.8 | 0.0 | 0.0 |
| Hambden | 48 | 689 | 95.8 | 96.8 | 0.0 | 0.0 | 4.2 | 3.2 | 0.0 | 0.0 |
| Huntsburg | 104 | 1334 | 88.5 | 94.3 | 0.0 | 0.0 | 3.9 | 2.5 | 7.7 | 3.2 |
| Middlefield | 90 | 1562 | 88.9 | 91.9 | 0.0 | 0.0 | 1.1 | 0.5 | 10.0 | 7.6 |
| Montville | 90 | 1102 | 88.9 | 95.1 | 0.0 | 0.0 | 1.1 | 4.9 | 0.0 | 0.0 |
| Munson | 60 | 743 | 65.0 | 30.1 | 0.0 | 0.0 | 35.0 | 19.9 | 0.0 | 0.0 |
| Nowbury | 46 | 752 | 89.1 | 94.9 | 0.0 | 0.0 | 8.7 | 4.5 | 2.2 | 0.6 |
| Parkman | 92 | 1366 | 89.1 | 95.2 | 0.0 | 0.0 | 3.3 | 1.1 | 7.6 | 3.7 |
| Russell | 31 | 480 | 100.0 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Thompson | 68 | 1006 | 97.1 | 98.4 | 0.0 | 0.0 | 2.9 | 1.6 | 0.0 | 0.0 |
| Troy | 84 | 1199 | 98.8 | 99.7 | 0.0 | 0.0 | 1.2 | 0.3 | 0.0 | 0.0 |
| Total | 987 | 14362 | 89.5 | 94.6 | 0.0 | 0.0 | 7.8 | 3.9 | 2.7 | 1.5 |

Huron County

This county was included in Area VI but because it is partly in the Cleveland Milk shed, it is also included here.

Cleveland draws heavily on milk from the eastern part and some from most of the other townships. The sale of butterfat still accounted for one third of the cows of the county. Such sales are especially heavy in southwestern Huron County.

The 1940 Census reported 355 farms with dairy products as the major source of income with an average value of such products of \$768.69 per farm. Total value of dairy products sales for the county in 1939 was \$539,867.

Huron County had 53 producer-distributors licensed under the Burk Act. Of these 18 were reported as in business in 1942. New names listed in the survey brought the total to 33.

The following milk dealers were licensed in May, 1942, under House Bill 569;

Norwalk:

Bell's Dairy
Norwalk Pure Milk Inc.
Wright Dairy

New London:

Morris J. Lawrence
Upton Dairy

Willard:

Willard Dairy
Square Deal Dairy

There were 7 cream stations under license.

The county and the city of Norwalk were operating under the U. S. Public Health Service standard ordinance. A sanitarian was in charge.

Table 14. Number of Dairy Farms and Milk Cattle and Per cent of Each by Market Outlet, Huron County

| Township | Total Number of Farms | Total Number of Milk Cattle | For Fluid Consumption | | Fluid for Manufacture | | Butterfat | | Not Classified | |
|-------------|--------------------------------|--------------------------------------|-----------------------|----------------|-----------------------|----------------|--------------|----------------|----------------|----------------|
| | | | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. |
| Bronson | 99 | 919 | 38.4 | 53.1 | 20.2 | 22.4 | 33.3 | 21.7 | 8.1 | 2.8 |
| Clarksfield | 84 | 844 | 55.9 | 77.4 | 2.4 | 3.0 | 40.5 | 18.7 | 1.2 | 0.9 |
| Fairfield | 89 | 878 | 24.7 | 35.9 | 16.2 | 16.1 | 55.0 | 46.2 | 3.4 | 1.8 |
| Fitchville | 84 | 686 | 27.4 | 41.7 | 8.3 | 10.3 | 64.3 | 48.0 | 0.0 | 0.0 |
| Greenwich | 78 | 631 | 14.1 | 18.8 | 35.9 | 44.4 | 47.3 | 35.2 | 2.6 | 1.6 |
| Hartland | 97 | 980 | 44.3 | 56.5 | 17.5 | 20.4 | 28.9 | 18.1 | 9.3 | 5.0 |
| Lyme | 79 | 723 | 38.0 | 49.9 | 27.8 | 23.8 | 32.9 | 25.3 | 1.5 | 1.0 |
| Greenfield | 52 | 441 | 28.9 | 47.5 | 11.5 | 12.5 | 59.6 | 40.0 | 0.0 | 0.0 |
| New Haven | 79 | 690 | 30.4 | 40.7 | 7.6 | 7.1 | 62.0 | 52.2 | 0.0 | 0.0 |
| New London | 67 | 667 | 50.7 | 61.2 | 0.0 | 0.0 | 46.3 | 36.6 | 3.0 | 2.2 |
| Norwalk | 85 | 613 | 41.2 | 57.1 | 15.3 | 16.5 | 34.1 | 22.3 | 9.4 | 4.1 |
| Norwich | 91 | 803 | 6.6 | 8.1 | 26.4 | 24.5 | 57.1 | 59.3 | 9.9 | 8.1 |
| Perud | 96 | 785 | 2.1 | 2.8 | 58.3 | 63.7 | 31.3 | 28.5 | 8.3 | 5.0 |
| Richmond | 90 | 753 | 5.6 | 5.1 | 36.7 | 39.6 | 44.4 | 41.6 | 13.3 | 13.7 |
| Ridgefield | 81 | 751 | 18.5 | 21.4 | 37.0 | 32.4 | 30.9 | 33.4 | 13.6 | 12.3 |
| Ripley | 106 | 959 | 19.8 | 30.7 | 27.4 | 23.8 | 50.9 | 44.7 | 1.9 | 0.8 |
| Sherman | 60 | 446 | 18.3 | 17.5 | 15.3 | 13.9 | 68.6 | 68.6 | 0.0 | 0.0 |
| Townsend | 98 | 754 | 23.4 | 34.6 | 33.7 | 31.5 | 32.7 | 26.5 | 10.2 | 7.4 |
| Wakeman | 79 | 919 | 53.2 | 66.5 | 2.5 | 1.9 | 31.6 | 18.4 | 12.7 | 13.2 |
| Total | 1594 | 14247 | 28.0 | 38.9 | 22.0 | 21.7 | 43.9 | 34.8 | 6.1 | 4.6 |

Lake County

Only LeRoy, Madison and Perry Townships in the eastern end of this county were of much market importance. The sales were predominantly for fluid consumption. 188 of the 263 dairy farms were in those three townships.

The 1940 census reported only 113 farms with the sale of dairy products as their major source of income. The average income from such sales for these 113 farms was \$1292 for 1939. The total value of dairy products sold for the county was \$203,639 for 1939.

In 1935 there were 52 producer-distributors under license. Of these only 7 were reported as in business at the time of the survey. There were 15 additional farms reported making a total of 22 in 1942.

The following dealers were licensed in April 1942 under House Bill 569:

Painesville:

Fee's Home Dairy
Ideal Dairies Co.
Maple Brook Dairy Co.
C. V. Webb

Fairport Harbor:

Buckeye Dairy Co.
North Star Dairy Co.

Willoughby:

Shoffield Dairy

There was one cream station licensed.

The U. S. Public Health Service standard ordinance was in effect in both the county and the city of Painesville.

Table 15. Number of Dairy and Milk Cattle and Per cent of Each by Market Outlet, Lake County

| Township | Total Number of Farms | Total Number of Milk Cattle | For Fluid Consumption | | Fluid for Manufacture | | Butterfat | | Not Classified | |
|-------------|--------------------------------|--------------------------------------|--------------------------|----------------|--------------------------|----------------|--------------|----------------|-------------------|----------------|
| | | | Farm pet. | Cattle pet. | Farm pet. | Cattle pet. | Farm pet. | Cattle pet. | Farm pet. | Cattle pet. |
| Concord | 21 | 217 | 76.2 | 89.0 | 0.0 | 0.0 | 9.5 | 5.5 | 14.3 | 5.6 |
| Kirtland | 17 | 164 | 35.3 | 65.9 | 0.0 | 0.0 | 64.7 | 34.1 | 0.0 | 0.0 |
| LeRoy | 78 | 785 | 79.5 | 89.1 | 0.0 | 0.0 | 7.7 | 5.7 | 12.8 | 5.2 |
| Madison | 66 | 718 | 68.2 | 80.4 | 0.0 | 0.0 | 22.7 | 15.2 | 9.1 | 4.4 |
| Mentor | 15 | 77 | 6.7 | 11.7 | 0.0 | 0.0 | 93.3 | 88.3 | 0.0 | 0.0 |
| Painesville | 11 | 136 | 72.7 | 91.9 | 0.0 | 0.0 | 0.0 | 0.0 | 27.3 | 3.1 |
| Perry | 44 | 519 | 93.2 | 98.3 | 0.0 | 0.0 | 6.3 | 1.7 | 0.0 | 0.0 |
| Willoughby | 11 | 134 | 100.0 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total | 263 | 2750 | 72.2 | 85.6 | 0.0 | 0.0 | 19.4 | 10.9 | 8.4 | 3.5 |

Lorain County

The milk from this county was practically all sold for fluid consumption. With the exception of a few townships including Avon, Black River, Elyria and Sheffield the entire county ran heavy in milk production. No milk was reported as sold for fluid manufacture but this is one of the heaviest counties in production of milk for Cleveland.

The 1940 census recorded 1183 farms with dairy products as their major source of income with an average per farm of \$1050 for 1939. The total value of all dairy products sold in 1939 was reported as \$1,607,042.

In 1935 there were 57 producer-distributors under license of which but 7 were reported as such in the survey. This heavy loss was made up by the listing of 49 other farms giving a total of 56 for the county in 1942.

Under House Bill 569 the following licenses were in effect in April, 1942:

Lorain:

Baetz-Barber Dairy Co.
Steve Chick
East Side Dairy
Gusik's Dairy
Home Dairy
Hygrade Creamery
Lorain Creamery
Oakwood Dairy
Service Creamery
Sheffield Dairy Co.
Trotta's Creamery

Elyria:

Bauer Dairy
Bau's Dairy Farm
Buswells Dairy
Crawford Dairy
Burrer Dairy
Crystal Springs Dairy
Elyria Dairies
Elyria Pure Milk Co.
Tattersall Dairy

Amherst:

Baetz Dairy
Mertz Dairy
Thompson Farm Dairy
Zimmerman Dairy

Oberlin:

Dairy Service Co.
Parsons Jersey Farm
Worcester Dairy

Wellington:

Dol-Ro Hi-Test Dairy
Wellington Sanitary Dairy
Telling-Bello Vernon

Grafton:

Durkee Dairy
Keisler Dairy

Shoffield Village:

Mackert's Dairy

Strongsville:

Royal Crest Farm Dairy

There were no cream stations licensed.

Sanitary control was by local ordinance. In 1942 strong consideration was being given to the adoption of the U. S. Public Health Service standard ordinance.

Table 16. Number of Dairy and Milk Cattle and Per cent of each by Market Outlet, Lorain County

| Township | Total Number of Farms | Total Number of Milk Cattle | For Fluid Consumption | | Fluid for Manufacture | | Butterfat | | Not Classified | |
|-------------|--------------------------------|--------------------------------------|--------------------------|----------------|--------------------------|----------------|--------------|----------------|-------------------|----------------|
| | | | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. | Farm pct. | Cattle pct. |
| Amherst | 57 | 746 | 77.2 | 85.9 | 0.0 | 0.0 | 8.8 | 5.0 | 14.0 | 9.1 |
| Avon | 21 | 177 | 38.1 | 55.9 | 0.0 | 0.0 | 61.9 | 44.1 | 0.0 | 0.0 |
| Black River | 15 | 347 | 93.3 | 95.7 | 0.0 | 0.0 | 6.7 | 4.3 | 0.0 | 0.0 |
| Brighton | 52 | 764 | 90.4 | 94.8 | 0.0 | 0.0 | 9.6 | 5.2 | 0.0 | 0.0 |
| Brownhelm | 72 | 798 | 70.8 | 85.7 | 0.0 | 0.0 | 29.2 | 14.3 | 0.0 | 0.0 |
| Camden | 91 | 1151 | 83.5 | 92.2 | 0.0 | 0.0 | 16.5 | 7.8 | 0.0 | 0.0 |
| Carlisle | 95 | 1360 | 93.7 | 97.4 | 0.0 | 0.0 | 6.3 | 2.6 | 0.0 | 0.0 |
| Columbia | 83 | 1004 | 90.4 | 96.1 | 0.0 | 0.0 | 7.2 | 2.2 | 2.4 | 1.7 |
| Eaton | 118 | 1451 | 87.3 | 91.8 | 0.0 | 0.0 | 4.2 | 2.3 | 8.5 | 5.4 |
| Elyria | 20 | 278 | 90.0 | 94.2 | 0.0 | 0.0 | 10.0 | 5.8 | 0.0 | 0.0 |
| Grafton | 104 | 1452 | 86.5 | 93.4 | 0.0 | 0.0 | 11.6 | 5.3 | 1.9 | 1.3 |
| Henrietta | 67 | 842 | 71.6 | 84.0 | 0.0 | 0.0 | 28.4 | 16.0 | 0.0 | 0.0 |
| Huntington | 81 | 1194 | 81.5 | 91.7 | 0.0 | 0.0 | 8.6 | 3.6 | 9.9 | 4.7 |
| LaGrange | 127 | 2229 | 97.6 | 99.2 | 0.0 | 0.0 | 0.8 | 0.1 | 1.6 | 0.7 |
| Penfield | 101 | 1422 | 83.2 | 90.9 | 0.0 | 0.0 | 16.8 | 9.1 | 0.0 | 0.0 |
| Pittsfield | 112 | 1725 | 83.9 | 91.7 | 0.0 | 0.0 | 16.1 | 8.3 | 0.0 | 0.0 |
| Ridgeville | 62 | 613 | 69.4 | 82.5 | 0.0 | 0.0 | 17.7 | 12.4 | 12.9 | 5.1 |
| Rochester | 49 | 546 | 91.8 | 94.1 | 0.0 | 0.0 | 8.2 | 5.9 | 0.0 | 0.0 |
| Russia | 105 | 1445 | 90.5 | 95.4 | 0.0 | 0.0 | 9.5 | 4.6 | 0.0 | 0.0 |
| Sheffield | 39 | 336 | 53.8 | 75.6 | 0.0 | 0.0 | 23.1 | 15.2 | 23.1 | 9.2 |
| Wellington | 71 | 1153 | 88.7 | 96.4 | 0.0 | 0.0 | 0.0 | 0.0 | 11.3 | 3.6 |
| Total | 1542 | 21033 | 84.1 | 92.4 | 0.0 | 0.0 | 12.2 | 5.9 | 3.7 | 1.7 |

Mahoning County

In this county as most of the others of this area the predominating outlet was for milk for fluid consumption. A few of the townships sold considerable amounts of butterfat but very little milk was sold direct to fluid manufacturing plants.

According to the 1940 census there were 831 farms with dairy products as their major source of income, with an average per farm from this source of \$980 for 1939. In that year the total value of dairy products sold for the county was \$927,731.

In 1935 there were 89 producer-distributors under license and of these only 20 were reported as operating at the time of the survey. This loss was made up exactly by the addition of 69 new names so that the total for 1942 was the same as in 1935.

The dealers under license in 1942 were as follows:

Youngstown:

Frederick Co.
Independent Golden Glow Dairies
Issaly Dairy Co.
McGill Dairy
Smith Dairy Co.
Tech Food Products Co.
J. T. Morgan Dairy
Youngstown Sanitary Milk Co.
Dawson Farm Dairy

Lowellville:

Charles Arendas
Nixons Dairy
Olenick Dairy Co.

Beloit:

Mahoning Valley Coop Assoc.
Denny's Purity Dairy.
Telling-Belle Vernon Co.

Canfield:

Maplevale Dairy

Petersburg:

Petersburg Creamery Co.

Struthers:

Milligan Dairy

Poland:

Fred K. Raysor
Jas. S. Smith

There were no cream stations licensed in the county.

Sanitary controls were operated separately by the county and the city of Youngstown under local ordinances.

Table 17. Number of Dairy and Milk Cattle and Per cent of Each by Market Outlet, Mahoning County

| Township | Total Number of Farms | Total Number of Milk Cattle | For Fluid Consumption Farm Cattle pct. pct. | Fluid for Manufacture Farm Cattle pct. pct. | Butterfat Farm Cattle pct. pct. | Not Classified Farm Cattle pct. pct. |
|-------------|--------------------------------|--------------------------------------|--|--|---------------------------------------|---|
| Austintown | 63 | 607 | 79.4 90.3 | 0.0 0.0 | 3.2 1.6 | 17.4 8.1 |
| Beaver | 149 | 1619 | 75.2 87.6 | 0.7 0.5 | 17.4 9.9 | 6.7 2.0 |
| Berlin | 97 | 1289 | 67.0 79.1 | 0.0 0.0 | 33.0 20.9 | 0.0 0.0 |
| Boardman | 26 | 328 | 76.9 91.2 | 0.0 0.0 | 0.0 0.0 | 23.1 8.8 |
| Canfield | 69 | 870 | 85.5 95.3 | 0.0 0.0 | 7.2 2.6 | 7.3 2.1 |
| Coitsville | 94 | 955 | 67.0 85.4 | 0.0 0.0 | 22.3 10.1 | 10.7 4.5 |
| Ellsworth | 74 | 1236 | 86.5 90.0 | 0.0 0.0 | 6.8 7.0 | 6.7 3.0 |
| Goshen | 175 | 2655 | 72.6 86.0 | 4.0 2.9 | 18.3 9.5 | 5.1 1.6 |
| Green | 117 | 1298 | 53.0 63.9 | 0.0 0.0 | 42.7 29.1 | 4.3 2.0 |
| Jackson | 102 | 1448 | 87.3 89.9 | 0.0 0.0 | 10.8 7.7 | 1.9 2.4 |
| Milton | 77 | 959 | 68.3 79.4 | 3.9 4.8 | 18.2 10.6 | 9.1 5.2 |
| Poland | 68 | 731 | 66.2 83.0 | 0.0 0.0 | 25.0 14.0 | 8.8 3.0 |
| Smith | 134 | 2156 | 85.1 92.4 | 0.7 0.5 | 11.2 5.4 | 3.0 1.7 |
| Springfield | 170 | 2023 | 64.7 74.7 | 0.0 0.0 | 32.9 22.5 | 2.4 2.8 |
| Youngstown | | | of no marketing importance | | | |
| Total | 1415 | 18174 | 73.0 84.7 | 0.8 0.8 | 20.2 11.9 | 6.0 2.6 |

Medina County:

Medina county was included in Area II because many farms from the county go to Akron.

This county has an ideal location to enable all milk producers who so desire to have a city milk market outlet. The county is within easy access by truck to either Cleveland or Akron. Hard surface and gravel constituted 90 per cent of the total public road-mileage in 1940. The county is well adapted to dairying.

In the survey 72.8 per cent of the farms and 82.8 per cent of the cattle recorded were in the fluid consumption outlet. Of 19,502 cattle listed, 908 were credited to milk for manufacture and of these, 492 were located in Harrisville Township, the site of the Lodi milk plant. There were 347 farms selling butterfat scattered through all the townships of the county. There were but three townships in which less than 75 per cent of the cattle were listed as in the city milk market.

Cleveland was in 1940 the dominant market drawing from the county. The survey by McBride and Cowden in 1931 (see page 7/5 showed 1116 farms under Cleveland and 405 under Akron inspection. In 1930 the Milk Producers Association of Summit County and Vicinity serving the Akron market had 400 members in Medina County. In 1940 it had 167. During this period there were several milk truck routes transferred from the Akron to the Cleveland market.

According to the 1940 census there were 1161 farms with dairy products as their major source of income with an average of \$900 per farm for 1939. The total value of all dairy products sold for the county was \$1,383,683 for 1939.

Producer-distributors occupy a position of considerable importance in local milk distribution. In 1935 there were 20 producer-distributors under license. In 1940 there were 7 of these reported by the Board of Health and by those who checked our lists as still operating. In addition there were 55 more reported who were not licensed in 1935. Of these approximately 50 per cent were farms with 3 to 9 cows selling to a few people at the farm. This seems to indicate a substantial increase of farms in the past five years selling in this type of outlet.

Dealers under license in April 1942 under House Bill 569 were:

Medina:

Elm Farm Dairy
Hatch Dairy Co.

Lodi:

United Dairy Co.

Wadsworth:

Dairy Dale
H. & H Dairy
Middlebrook Dairy
Smith Dairy Products Co.

There were no cream stations licensed.

The county was served by a full-time health department. The administration for Wadsworth was combined with the county on a contract basis. Milk regulations were in effect

Table 18. Number of Dairy Farms and Milk Cattle and Per cent of Each by Market Outlet, Medina County

| Township | Total Number of Farms | Total Number of milk Cattle | For Fluid Consumption | | Fluid for Manufacture | | Butterfat | | Not Classified | |
|-------------|--------------------------------|--------------------------------------|--------------------------|----------------|--------------------------|----------------|---------------|----------------|-------------------|----------------|
| | | | Farms pct. | Cattle pct. | Farms pct. | Cattle pct. | Farms pct. | Cattle pct. | Farms pct. | Cattle pct. |
| Brunswick | 70 | 627 | 61.5 | 75.6 | 0.0 | 0.0 | 32.8 | 20.4 | 5.7 | 4.0 |
| Chatham | 89 | 824 | 43.8 | 55.1 | 11.2 | 10.3 | 42.6 | 31.8 | 2.4 | 2.8 |
| Granger | 90 | 1078 | 90.0 | 93.7 | 0.0 | 0.0 | 10.0 | 6.3 | 0.0 | 0.0 |
| Guilford | 133 | 1515 | 88.0 | 93.7 | 0.0 | 0.0 | 9.0 | 4.7 | 3.0 | 1.6 |
| Harrisville | 111 | 1125 | 27.0 | 41.6 | 50.5 | 43.8 | 22.5 | 14.6 | 0.0 | 0.0 |
| Hinckley | 66 | 729 | 87.9 | 95.0 | 3.0 | 1.1 | 9.1 | 3.9 | 0.0 | 0.0 |
| Homer | 105 | 1136 | 78.2 | 81.5 | 0.9 | 0.9 | 20.9 | 17.6 | 0.0 | 0.0 |
| Lafayette | 130 | 1208 | 50.7 | 70.4 | 0.7 | 0.5 | 47.0 | 27.9 | 1.6 | 1.2 |
| Litchfield | 94 | 1120 | 67.0 | 82.9 | 1.1 | 0.8 | 30.8 | 15.6 | 1.1 | 0.7 |
| Liverpool | 110 | 1301 | 90.1 | 95.9 | 0.9 | 0.2 | 4.5 | 2.1 | 4.5 | 1.8 |
| Medina | 109 | 1167 | 79.8 | 86.3 | 0.0 | 0.0 | 20.2 | 13.7 | 0.0 | 0.0 |
| Montville | 87 | 1029 | 77.0 | 86.5 | 4.6 | 3.0 | 15.0 | 8.6 | 3.4 | 1.9 |
| Sharon | 119 | 1372 | 74.0 | 82.7 | 0.0 | 0.0 | 26.0 | 17.3 | 0.0 | 0.0 |
| Spencer | 87 | 1229 | 66.7 | 76.6 | 16.1 | 15.2 | 17.2 | 8.2 | 0.0 | 0.0 |
| Wadsworth | 114 | 1321 | 90.4 | 95.0 | 0.8 | 1.2 | 8.8 | 3.8 | 0.0 | 0.0 |
| Westfield | 103 | 1254 | 81.6 | 85.8 | 2.9 | 4.9 | 12.6 | 8.0 | 2.9 | 1.3 |
| York | 95 | 1467 | 85.3 | 93.2 | 0.0 | 0.0 | 13.7 | 6.3 | 1.0 | 0.5 |
| Total | 1712 | 19502 | 72.8 | 82.8 | 5.5 | 4.7 | 20.3 | 11.7 | 1.4 | 0.8 |

Portage County:

This county was reported in Area II but because it has a considerable amount of milk going into Cleveland it is included here also.

Portage County is similar to Summit in many respects. Its dairy production and marketing is closely tied up with the city of Akron. The county increased in number of farms from 2766 in 1930 to 3369 in 1940. Many of the smaller farms were occupied by part time farmers. The urban population within the county was small. In 1940 the population of the two cities were Kent 8566 and Ravenna 8445.

The percentage of farms listed as in the market for fluid consumption was 78.8 and the percentage of cows 86.3. This was highest of the nine counties. Aurora and Paris Townships had 100 per cent of the farms reported in this outlet.

According to the 1940 census there were 1102 farms with dairy products as their major source of income with an average per farm for 1939 of \$947. The total value of all dairy products sold for that year for the county was \$1,357,433.

The producers selling into the Akron market were practically all members of the Milk Producers Association of Summit County and Vicinity. This association is discussed in the section of Summit County. About 100 producers in the county sold their milk to the condensory of the United Milk Products Company at Kent. This was a Cleveland concern and the shippers were under Cleveland inspection.

The dairy production and marketing pattern of the county will be affected by the construction of a large munitions plant near Ravenna. Some dairy farms were absorbed in this site and others were vitally affected by the demand for labor. The milk supply needed for the increased population will probably come in large measure from the present Akron milk shed if the sanitary requirements are met.

Producer-distributors were responsible for much of the local milk sales. There were 44 licensed in 1935. Of these 9 were found to be operating in 1940. Reporters added 26 new names to the list in 1940. This indicates that in numbers, producer-distributors have declined slightly in the past 5 years.

The following milk dealers were licensed in April 1942 under House Bill 569:

Ravenna:

Cornelius B. Bowman
Frank's Dairy
Mosor Dairy
Vale Edge Dairy

Kent:

Fenn Dairy
Perfection Dairy Prod. Co.
United Milk Prod. Co.

Garrettsville:

Rand Dairy
Puritain Ice Cream Co.

There was one cream station licensed.

Portage County has a full time health department, but does not have milk regulations. Ravenna and Kent are on a part time basis and also without a set of milk regulations.

Table 19. Number of Dairy Farms and Milk Cattle and Per cent of Each by Market Outlet, Portage County

| Township | Total Number of Farms | Total Number of Milk Cattle | For Fluid Consumption | | Fluid for Manufacture | | Butterfat | | Not Classified | |
|-------------|--------------------------------|--------------------------------------|--------------------------|-------|--------------------------|------|-----------|------|-------------------|------|
| | | | pct. | pct. | pct. | pct. | pct. | pct. | pct. | pct. |
| Atwater | 81 | 1076 | 55.6 | 68.6 | 0.0 | 0.0 | 43.2 | 30.0 | 1.2 | 1.4 |
| Aurora | 43 | 851 | 100.0 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Brimfield | 31 | 1025 | 39.5 | 51.3 | 37.0 | 34.4 | 21.0 | 13.1 | 2.5 | 1.2 |
| Charlestown | 69 | 860 | 94.2 | 95.1 | 0.0 | 0.0 | 4.3 | 4.4 | 1.5 | 0.5 |
| Deerfield | 98 | 1452 | 76.5 | 85.3 | 11.2 | 8.7 | 10.2 | 5.0 | 2.1 | 1.0 |
| Edinburg | 94 | 1118 | 65.9 | 75.2 | 11.7* | 9.8* | 21.3 | 14.4 | 1.1 | 1.6 |
| Franklin | 38 | 517 | 86.8 | 90.5 | 2.6 | 3.7 | 5.3 | 3.1 | 5.3 | 2.7 |
| Freedom | 93 | 1184 | 81.7 | 85.8 | 5.4 | 5.4 | 9.7 | 6.3 | 3.2 | 2.5 |
| Hiram | 84 | 1308 | 89.2 | 95.0 | 3.7 | 1.3 | 0.0 | 0.0 | 7.1 | 3.7 |
| Mantua | 82 | 1613 | 93.9 | 97.5 | 0.0 | 0.0 | 4.9 | 1.6 | 1.2 | 0.9 |
| Nelson | 92 | 1152 | 77.1 | 85.6 | 3.3 | 2.8 | 15.2 | 9.2 | 4.4 | 2.4 |
| Palmyra | 82 | 1092 | 84.2 | 91.5 | 0.0 | 0.0 | 14.7 | 7.4 | 1.1 | 1.1 |
| Paris | 77 | 1187 | 100.0 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Randolph | 126 | 1272 | 79.4 | 84.5 | 5.5 | 4.8 | 14.3 | 10.1 | 0.8 | 0.6 |
| Ravenna | 50 | 713 | 66.0 | 78.7 | 0.0 | 0.0 | 22.0 | 11.9 | 12.0 | 9.4 |
| Rootstown | 79 | 986 | 73.6 | 84.3 | 2.5 | 2.4 | 13.9 | 7.7 | 10.0 | 5.6 |
| Shalerville | 82 | 1174 | 79.2 | 85.2 | 8.5 | 5.9 | 2.5 | 2.2 | 9.8 | 6.7 |
| Streetsboro | 72 | 1307 | 86.1 | 83.6 | 12.5 | 10.1 | 0.0 | 0.0 | 1.4 | 1.3 |
| Suffield | 92 | 1024 | 79.4 | 85.7 | 0.0 | 0.0 | 20.6 | 14.3 | 0.0 | 0.0 |
| Windham | 64 | 765 | 84.4 | 90.3 | 1.6 | 1.8 | 10.9 | 6.7 | 3.1 | 1.2 |
| Total | 1579 | 21676 | 78.8 | 86.3 | 5.7 | 4.6 | 12.3 | 7.1 | 3.2 | 2.0 |

*Used in the manufacture of Swiss Cheese

Summit County

This county was included in Area II but the north end of this county sends milk to Cleveland.

In the past 10 years there had been a striking increase in the number of farms in the county. In 1930 the Census gave 1503; by 1935 the number had increased to 2800; and in 1940, to 2943. This indicated that there were a large number of part-time farmers. Some of these farms had a few cows and in addition to the milk produced for family use they sold some to buyers at the farm. There were also several large dairy farms that offered milk in gallon jugs to the public.

The dairy production of the county went predominantly into milk for fluid consumption. 75.4 per cent of the farms and 86.7 per cent of the cattle fell into this classification in the survey. 16.4 per cent of the farms but only 9.2 per cent of the cattle were in the butterfat market. These farms were largely in townships with heavy mileage of earth roads. The number of farms selling to manufacturing plants was negligible.

According to the 1940 census there were 431 farms with dairy products as their major source of income with an average per farm of \$1403 for 1939. For that year the total value of all dairy products sold for the county was \$762,743.

The producer-distributor situation has undergone rapid change in the past five years. Under the Burk Act there were 32 producer-distributors licensed for the year ending July 1, 1935. Of these, only five were reported in the survey as producer-distributors in 1940. There were, however, 78 additional farms checked as selling to consumers that were not licensed in 1935. Many of these farms had from 3 to 8 cows and sold only to a few neighbors but there were in this list 24 farms with 15 or more cattle tested.

The following firms were licensed as milk dealers in April 1942 under the provisions of House Bill 569.

Akron:

Akron Pure Milk Co.
Averill Dairy Co.
Belle Isle Dairy, Inc.
Borden Co.
Chestnut Ridge Dairy
Isaly Dairy Co.
Kessolring Dairy
Lawson Milk Co.
Reiter Dairy Co.
Sumner Creamery Co.

Barberton:

Avon Dairy
Parkers Dairy
Geo. Sorooff Dairy
X-cool Dairy, Inc.

Coploy:

Frederick Dairy

Cuyahoga Falls:

Falls Dairy

Stow:

Alvin F. Stein

There were no cream stations licensed.

Supervision of milk supply by the local health administration was complete. The county had a full time administration with milk inspection. The same was true of the cities of Akron and Barberton. A recent order for separation of cattle from horses by solid partition in barns under inspection brought forth some protest on the part of producers. There has been for some time an exchange of inspections between Cleveland and Akron Health Boards.

Table 20. Number of Dairy Farms and Milk Cattle and Per cent of Each by Market Outlet, Summit County

| Township | Total Number of Farms | Total Number of Milk Cows | For Fluid | | Fluid for | | Butterfat | | Not | |
|-------------|--------------------------------|------------------------------------|-------------|-------------|-------------|-------------|-----------|--------|------------|------------|
| | | | Consumption | Consumption | Manufacture | Manufacture | Farm | Farm | Classified | Classified |
| | | | Farm | Cattle | Farm | Cattle | Farm | Cattle | Farm | Cattle |
| | | | pct. | pct. | pct. | pct. | pct. | pct. | pct. | pct. |
| Bath | 61 | 747 | 78.6 | 86.5 | 3.4 | 1.3 | 16.4 | 11.0 | 1.6 | 1.2 |
| Boston | 16 | 220 | 75.0 | 85.5 | 0.0 | 0.0 | 18.8 | 12.2 | 6.2 | 2.3 |
| Copley | 75 | 625 | 72.0 | 84.8 | 0.0 | 0.0 | 17.3 | 9.3 | 10.7 | 5.9 |
| Coventry | 22 | 256 | 72.8 | 85.2 | 18.2 | 5.5 | 4.5 | 6.6 | 4.5 | 2.7 |
| Franklin | 82 | 684 | 64.6 | 75.8 | 0.0 | 0.0 | 29.3 | 20.8 | 6.1 | 3.4 |
| Green | 102 | 1033 | 66.6 | 75.2 | 7.8 | 8.6 | 24.5 | 15.8 | 1.1 | 0.4 |
| Hudson | 55 | 796 | 89.1 | 94.9 | 1.8 | 0.6 | 9.1 | 4.5 | 0.0 | 0.0 |
| Northampton | 49 | 583 | 89.8 | 95.9 | 0.0 | 0.0 | 2.0 | 0.7 | 8.2 | 3.4 |
| Northfield | 36 | 543 | 75.0 | 86.0 | 0.0 | 0.0 | 22.2 | 12.8 | 2.8 | 1.2 |
| Norton | 47 | 509 | 89.3 | 93.5 | 0.0 | 0.0 | 4.3 | 2.2 | 6.4 | 4.3 |
| Richfield | 35 | 406 | 77.1 | 87.2 | 0.0 | 0.0 | 22.9 | 12.8 | 0.0 | 0.0 |
| Springfield | 45 | 400 | 53.3 | 73.3 | 11.1 | 6.5 | 26.7 | 16.0 | 8.9 | 4.2 |
| Stowfalls | 39 | 489 | 84.6 | 92.9 | 2.5 | 1.4 | 2.5 | 2.0 | 10.4 | 3.7 |
| Tallmadge | 31 | 462 | 80.7 | 93.4 | 0.0 | 0.0 | 3.2 | 0.9 | 16.1 | 5.7 |
| Twinsburg | 30 | 661 | 83.3 | 95.3 | 0.0 | 0.0 | 16.7 | 4.7 | 0.0 | 0.0 |
| Total | 725 | 8424 | 75.4 | 86.7 | 2.9 | 1.8 | 16.4 | 9.2 | 5.3 | 2.3 |

Trumbull County

This county was second only to Ashtabula in number of dairy cattle and the milk from over 90 per cent of the cows was sold for fluid consumption. Two townships had some milk going for fluid manufacture.

According to the 1940 census there were 1393 farms with the sale of dairy products as their major source of income. The average income of these 1393 farms from sale of such products was \$350 for 1939. For that year the total value of all dairy products sold for the county was \$1,393,265.

This is one of the few counties that showed a substantial gain in producer-distributors over the 1935 records. There were 30 producer-distributors licensed under the Burk Act. Of these, 21 were reported as operating at the time of the survey. Those reporting added 117 farms for 1942 making a total of the county of 138.

Dealers licensed in April 1942 under the provisions of House Bill 569 were:

Warren:

| | |
|-----------------------|--------------------------|
| Braden Dairy | Kreitler & Sons |
| F. W. Catchpole | Risher's Dairy, Inc. |
| Cook's Highland Dairy | Square Deal Dairy |
| Biery's Dairy | Twin Elm Dairy |
| Gold Spring Dairy Co. | Warren Sanitary Milk Co. |
| Belmont Dairy | Willow brook Dairy |

Niles:

Cramer Dairy
Madden & Hubbard
Springdale Dairy

Cortland:

O. L. Biggin

Newton Falls:

C. W. Burton

West Farmington:

Harry J. Clark

Youngstown:

Lorenz Dairy

Farmdale:

Ohio Evaporated Milk Co.

Lockwood:

Ohio Evaporated Milk Co.

Mineral Ridge, Rt. #1:

Riverside Dairy, Inc.

There was one cream station located at East Orwell.

Trumbull County adopted the U. S. Public Health Service standard ordinance in July, 1942. The city of Warren had for several years given sanitary inspection of farms supplying the city.

Table 21. Number of Dairy Farms and Milk Cattle, and Per cent of each by Market Outlet, Trumbull County

| Township | Total Number of Farms | Total Number of Milk Cattle | For Fluid | | Fluid for | | Butterfat | | Not | |
|--------------|--------------------------------|--------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|------------|-------------|
| | | | Consumption | Farm Cattle | Manufacture | Farm Cattle | Farm Cattle | Farm Cattle | Classified | Farm Cattle |
| | | | pct. | pct. | pct. | pct. | pct. | pct. | pct. | pct. |
| Bazetta | 86 | 962 | 77.9 | 90.6 | 0.0 | 0.0 | 14.0 | 6.7 | 8.1 | 2.7 |
| Bloomfield | 65 | 1218 | 95.4 | 97.5 | 0.0 | 0.0 | 4.6 | 2.5 | 0.0 | 0.0 |
| Braceville | 62 | 637 | 77.4 | 86.8 | 0.0 | 0.0 | 21.0 | 12.2 | 1.6 | 1.0 |
| Bristol | 67 | 997 | 92.5 | 96.4 | 0.0 | 0.0 | 4.5 | 2.5 | 3.0 | 1.1 |
| Brookfield | 82 | 958 | 80.5 | 93.7 | 0.0 | 0.0 | 6.1 | 2.4 | 13.4 | 3.9 |
| Champion | 73 | 884 | 83.6 | 91.0 | 0.0 | 0.0 | 11.0 | 6.9 | 5.4 | 2.1 |
| Farmington | 85 | 1388 | 84.7 | 94.6 | 9.4 | 3.4 | 5.9 | 2.0 | 0.0 | 0.0 |
| Fowler | 76 | 1067 | 100.0 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Greene | 116 | 1468 | 78.4 | 86.9 | 0.0 | 0.0 | 20.7 | 12.4 | 0.9 | 0.7 |
| Gustavus | 102 | 1672 | 95.1 | 96.8 | 0.0 | 0.0 | 2.9 | 2.2 | 2.0 | 1.0 |
| Hartford | 112 | 1379 | 58.0 | 79.3 | 0.0 | 0.0 | 38.4 | 19.1 | 3.6 | 1.6 |
| Howland | 44 | 433 | 90.9 | 96.5 | 0.0 | 0.0 | 0.0 | 0.0 | 9.1 | 3.5 |
| Hubbard | 64 | 784 | 93.8 | 97.5 | 0.0 | 0.0 | 6.2 | 2.5 | 0.0 | 0.0 |
| Johnston | 30 | 423 | 86.7 | 96.2 | 0.0 | 0.0 | 0.0 | 0.0 | 13.3 | 3.8 |
| Kinsman | 84 | 1520 | 97.6 | 99.4 | 0.0 | 0.0 | 2.4 | 0.6 | 0.0 | 0.0 |
| Liberty | 26 | 288 | 73.1 | 89.2 | 0.0 | 0.0 | 0.0 | 0.0 | 26.9 | 10.8 |
| Lordstown | 104 | 1270 | 76.9 | 89.2 | 0.0 | 0.0 | 14.4 | 7.7 | 8.7 | 3.1 |
| Mosca | 105 | 1391 | 85.7 | 91.9 | 0.0 | 0.0 | 14.3 | 8.1 | 0.0 | 0.0 |
| Mesopotamia | 83 | 1509 | 69.9 | 70.8 | 22.9 | 26.9 | 7.2 | 2.3 | 0.0 | 0.0 |
| Newton | 77 | 1024 | 83.1 | 92.7 | 0.0 | 0.0 | 16.9 | 7.3 | 0.0 | 0.0 |
| Southington | 109 | 1128 | 78.0 | 85.0 | 0.0 | 0.0 | 15.6 | 8.3 | 6.4 | 6.7 |
| Vernon | 105 | 1499 | 94.3 | 96.4 | 0.0 | 0.0 | 1.9 | 0.9 | 3.8 | 2.7 |
| Vienma | 63 | 566 | 47.6 | 57.4 | 0.0 | 0.0 | 42.9 | 33.4 | 9.5 | 9.2 |
| Warren | 35 | 399 | 62.9 | 79.4 | 0.0 | 0.0 | 34.3 | 19.1 | 2.9 | 1.5 |
| Weatherfield | 21 | 221 | 100.0 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total | 1876 | 25085 | 82.3 | 90.5 | 1.4 | 1.8 | 12.4 | 6.0 | 3.9 | 1.7 |

W. E. Krauss

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FARM SALES OF OHIO MILK THROUGH DIFFERENT OUTLETS

C. G. McBride
and
R. W. Sherman

Part I. Columbus Area: Delaware, Fairfield, Franklin, Licking
Madison, Pickaway and Union Counties.

Part II. Akron-Canton Area: Carroll, Columbiana, Holmes, Medina,
Portage, Stark, Summit, Tuscarawas and Wayne Counties.

Part III. Toledo and Northwestern Ohio Area: Defiance, Fulton,
Hancock, Henry, Lucas, Ottawa, Paulding, Putnam,
Sandusky, Seneca, Williams and Wood Counties.

Part IV. Dayton-Cincinnati Area: Butler, Champaign, Clark, Clermont,
Clinton, Darke, Greene, Hamilton, Miami, Montgomery,
Preble and Warren Counties.

Part V. South Central Ohio Area: Adams, Athens, Brown, Fayette, Gallia,
Highland, Hocking, Jackson, Lawrence, Meigs, Pike, Ross,
Scioto and Vinton Counties.

Part VI. West Central Ohio Area: Allen, Ashland, Auglaize, Crawford,
Hardin, Huron, Knox, Logan, Marion, Mercer, Morrow, Richland,
Shelby, Van Wert and Wyandot Counties.

Part VII. South Eastern Ohio Area: Belmont, Coshocton, Guernsey,
Harrison, Jefferson, Monroe, Morgan, Muskingum, Noble,
Perry and Washington Counties.

Part VIII. Northeastern Ohio Area: Ashtabula, Cuyahoga, Erie, Geauga,
Huron, Lake, Lorain, Mahoning, Medina, Portage, Summit
and Trumbull Counties.

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Ohio Agricultural Experiment Station

Columbus, Ohio